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1140

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1183

<210> 3852

<211> 323

<212> PRT

<213> Homo sapiens

<400> 3852

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Val	Leu	Val	Val	Leu	Leu	Val	Val	Ile	Val	Val	Leu	Ala	Phe	Asn	Tyr
			20					25					30		
Trp	Ser	Ile	Ser	Ser	Arg	His	Val	Leu	Leu	Gln	Glu	Glu	Val	Ala	Glu
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Leu	Gln	Gly	Gln	Val	Gln	Arg	Thr	Glu	Val	Ala	Arg	Gly	Arg	Leu	Glu
	50					55				60					
Lys	Arg	Asn	Ser	Asp	Leu	Leu	Leu	Leu	Val	Asp	Thr	His	Lys	Lys	Gln
65					70					75					80
Ile	Asp	Gln	Lys	Glu	Ala	Asp	Tyr	Gly	Arg	Leu	Ser	Ser	Arg	Leu	Gln
			85					90					95		
Ala	Arg	Glu	Gly	Leu	Gly	Lys	Arg	Cys	Glu	Asp	Asp	Lys	Val	Lys	Leu
			100					105					110		
Gln	Asn	Asn	Ile	Ser	Tyr	Gln	Met	Ala	Asp	Ile	His	His	Leu	Lys	Glu
		115					120					125			
Gln	Leu	Ala	Glu	Leu	Arg	Gln	Glu	Phe	Leu	Arg	Gln	Glu	Asp	Gln	Leu
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Gln	Asp	Tyr	Arg	Lys	Asn	Asn	Thr	Tyr	Leu	Val	Lys	Arg	Leu	Glu	Tyr
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Glu	Ser	Phe	Gln	Cys	Gly	Gln	Gln	Met	Lys	Glu	Leu	Arg	Ala	Gln	His
			165					170					175		
Glu	Glu	Asn	Ile	Lys	Lys	Leu	Ala	Asp	Gln	Phe	Leu	Glu	Glu	Gln	Lys
		180						185					190		
Gln	Glu	Thr	Gln	Lys	Ile	Gln	Ser	Asn	Asp	Gly	Lys	Glu	Leu	Asp	Ile
	195						200					205			
Asn	Asn	Gln	Val	Val	Pro	Lys	Asn	Ile	Pro	Lys	Val	Ala	Glu	Asn	Val
	210					215					220				
Ala	Asp	Lys	Asn	Glu	Glu	Pro	Ser	Ser	Asn	His	Ile	Pro	His	Gly	Lys
225				230						235					240
Glu	Gln	Ile	Lys	Arg	Gly	Gly	Asp	Ala	Gly	Met	Pro	Gly	Ile	Glu	Glu
			245					250					255		
Asn	Asp	Leu	Ala	Lys	Val	Asp	Asp	Leu	Pro	Pro	Ala	Leu	Arg	Lys	Pro
		260						265					270		
Pro	Ile	Ser	Val	Ser	Gln	His	Glu	Ser	His	Gln	Ala	Ile	Ser	His	Leu
	275						280						285		
Pro	Thr	Gly	Gln	Pro	Leu	Ser	Pro	Asn	Met	Pro	Pro	Asp	Ser	His	Ile
	290					295					300				
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Leu	His	Ala													

<210> 3853  
 <211> 375  
 <212> DNA  
 <213> Homo sapiens

<400> 3853  
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 180  
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 240  
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<210> 3854  
 <211> 125  
 <212> PRT  
 <213> Homo sapiens

<400> 3854  
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 Gln Ile Tyr Lys Gln Leu Gln Glu Met Asp Glu Arg Arg Thr Ile Lys  
 35 40 45  
 Leu Ser Glu Cys Tyr Arg Gly Phe Ala Asp Ser Glu Arg Lys Val Ile  
 50 55 60  
 Pro Ile Ile Ser Lys Cys Leu Glu Gly Met Ile Leu Ala Ala Lys Ser  
 65 70 75 80  
 Val Asp Glu Arg Arg Asp Ser Gln Met Val Val Asp Ser Phe Lys Ser  
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 Gly Phe Glu Pro Pro Gly Asp Phe Pro Phe Glu Asp Tyr Ser Gln His  
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<210> 3855  
 <211> 1377  
 <212> DNA  
 <213> Homo sapiens

<400> 3855  
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 120



cagaactgtg gctctggtgt ggttgggata gtggactatg gacctagacc caacaagagt  
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 tatgtgggag atggcttctc atgcagtggg aacctgctgc aggtcctgat gtccttcccc  
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 360  
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 420  
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 480  
 gtcagcatgt ttttctacaa tgacctgtc aatggcacn accctgcaaa cgagggtggg  
 540  
 aagcaagctg ctcatcactg ccagccagga cccactnncc aaccgacgga gaccagggtt  
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 gttgatggaa gagccattct gcagtgggac atctttgcct ccaatgggat cattcatgtc  
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 720  
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 780  
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 1080  
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 1200  
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<210> 3856

<211> 330

<212> PRT

<213> Homo sapiens

<400> 3856

Xaa	Ala	Ala	Thr	Met	Ala	Thr	Tyr	Asn	Gln	Leu	Ser	Tyr	Ala	Gln	Lys
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Ala	Lys	Tyr	His	Leu	Cys	Ser	Ala	Gly	Trp	Leu	Glu	Thr	Gly	Arg	Val
			20					25					30		
Ala	Tyr	Pro	Thr	Ala	Phe	Ala	Ser	Gln	Asn	Cys	Gly	Ser	Gly	Val	Val

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      35      40      45
Gly Ile Val Asp Tyr Gly Pro Arg Pro Asn Lys Ser Glu Met Trp Asp
  50      55      60
Val Phe Cys Tyr Arg Met Lys Asp Val Asn Cys Thr Cys Lys Val Gly
  65      70      75      80
Tyr Val Gly Asp Gly Phe Ser Cys Ser Gly Asn Leu Leu Gln Val Leu
      85      90      95
Met Ser Phe Pro Ser Leu Thr Asn Phe Leu Thr Glu Val Leu Ala Tyr
      100      105      110
Ser Asn Ser Ser Ala Arg Gly Arg Ala Phe Leu Glu His Leu Thr Asp
      115      120      125
Leu Ser Ile Arg Gly Thr Leu Phe Val Pro Gln Asn Ser Gly Leu Gly
      130      135      140
Glu Asn Glu Thr Leu Ser Gly Arg Asp Ile Glu His His Leu Ala Asn
  145      150      155      160
Val Ser Met Phe Phe Tyr Asn Asp Leu Val Asn Gly Thr Xaa Pro Ala
      165      170      175
Asn Glu Gly Gly Lys Gln Ala Ala His His Cys Gln Pro Gly Pro Thr
      180      185      190
Xaa Gln Pro Thr Glu Thr Arg Phe Val Asp Gly Arg Ala Ile Leu Gln
      195      200      205
Trp Asp Ile Phe Ala Ser Asn Gly Ile Ile His Val Ile Ser Arg Pro
      210      215      220
Leu Lys Ala Pro Pro Ala Pro Val Thr Leu Thr His Thr Gly Leu Gly
  225      230      235      240
Ala Gly Ile Phe Phe Ala Ile Ile Leu Val Thr Gly Ala Val Ala Leu
      245      250      255
Ala Ala Tyr Ser Tyr Phe Arg Ile Asn Arg Arg Thr Ile Gly Phe Gln
      260      265      270
His Phe Glu Ser Glu Glu Asp Ile Asn Val Ala Ala Leu Gly Lys Gln
      275      280      285
Gln Pro Glu Asn Ile Ser Asn Pro Leu Tyr Glu Ser Thr Thr Ser Ala
      290      295      300
Pro Pro Glu Pro Ser Tyr Asp Pro Phe Thr Asp Ser Glu Glu Arg Gln
  305      310      315      320
Leu Glu Gly Asn Asp Pro Leu Arg Thr Leu
      325      330

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&lt;210&gt; 3857

&lt;211&gt; 797

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3857

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ccttcacca ggtcctgggc gagaagcata agcgcggcca cctggccgag gccgagggcc

180

acagggacac ttgcgacgaa gactcgttgg ccggcgagtc ggaccgcata gacgatggca

240

ctgttaatgg ccgcggctgc tccccgggcg agtcggcctc ggggggcctg tccaaaaagc

300

tgctgctggg cagccccagc tcgctgagcc ccttctctaa gcgcatcaag ctcgagaagg  
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 420  
 ccggctacgc ggctccagg cagctcaaag atcccttctt tagcttcgga gactccagac  
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 660  
 gcgacacttg ttcttcacac accccattc ggcgtagtac ccagagagct caagatgtgt  
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 797

<210> 3858

<211> 76

<212> PRT

<213> Homo sapiens

<400> 3858

Xaa	Arg	Ala	Thr	Thr	Arg	Thr	Ala	Ser	Gly	Ala	Arg	Ser	Trp	Ala	Trp
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Ala	Thr	Arg	Ala	Ala	Pro	Cys	Pro	Thr	Ser	Cys	Arg	Ala	Trp	Cys	Ser
			20					25					30		
Ala	Pro	Cys	Ser	Thr	Ser	Ala	Arg	Pro	Ser	Thr	Arg	Ser	Trp	Ala	Arg
			35				40					45			
Ser	Ile	Ser	Ala	Ala	Thr	Trp	Pro	Arg	Pro	Arg	Ala	Thr	Gly	Thr	Leu
	50					55				60					
Ala	Thr	Lys	Thr	Arg	Trp	Pro	Ala	Ser	Arg	Thr	Ala				
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<210> 3859

<211> 1449

<212> DNA

<213> Homo sapiens

<400> 3859

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 180  
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 240  
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 300  
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 360

cctaagcgaa tagcacaaac acagccagct gaatcaaaca ccatcagtag gataactgca  
 420  
 aacatggaaa atggagaaaa tgaaggaaca attaaaatta ttgcaccttc accagtaaaa  
 480  
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 540  
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 780  
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 960  
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 1020  
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 1080  
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 1440  
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 1449

&lt;210&gt; 3860

&lt;211&gt; 348

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3860

Tyr	Lys	Asn	Lys	Lys	Gln	Val	Gly	Lys	Tyr	Phe	Trp	Pro	Arg	Ile	Thr
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Lys	Val	His	Phe	Lys	Glu	Thr	Gln	Phe	Glu	Leu	Arg	Val	Leu	Gly	Lys
			20					25					30		
Asp	Cys	Asn	Glu	Thr	Ser	Phe	Phe	Phe	Glu	Ala	Arg	Ser	Lys	Thr	Ala
		35					40					45			
Cys	Lys	His	Leu	Trp	Lys	Cys	Ser	Val	Glu	His	His	Thr	Phe	Phe	Arg
	50					55					60				
Met	Pro	Glu	Asn	Glu	Ser	Asn	Ser	Leu	Ser	Arg	Lys	Leu	Ser	Lys	Phe

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Gly	Ser	Ile	Arg	Tyr	Lys	His	Arg	Tyr	Ser	Gly	Arg	Thr	Ala	Leu	Gln
			85						90					95	
Met	Ser	Arg	Asp	Leu	Ser	Ile	Gln	Leu	Pro	Arg	Pro	Asp	Gln	Asn	Val
			100					105					110		
Thr	Arg	Ser	Arg	Ser	Lys	Thr	Tyr	Pro	Lys	Arg	Ile	Ala	Gln	Thr	Gln
		115					120					125			
Pro	Ala	Glu	Ser	Asn	Thr	Ile	Ser	Arg	Ile	Thr	Ala	Asn	Met	Glu	Asn
	130					135				140					
Gly	Glu	Asn	Glu	Gly	Thr	Ile	Lys	Ile	Ile	Ala	Pro	Ser	Pro	Val	Lys
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Ser	Phe	Lys	Lys	Ala	Lys	Asn	Glu	Asn	Ser	Pro	Asp	Thr	Gln	Arg	Ser
			165					170					175		
Lys	Ser	His	Ala	Pro	Trp	Glu	Glu	Asn	Gly	Pro	Gln	Ser	Gly	Leu	Tyr
		180						185					190		
Asn	Ser	Pro	Ser	Asp	Arg	Thr	Lys	Ser	Pro	Lys	Phe	Pro	Tyr	Thr	Arg
		195					200					205			
Arg	Arg	Asn	Pro	Ser	Cys	Gly	Ser	Asp	Asn	Asp	Ser	Val	Gln	Pro	Val
	210					215				220					
Arg	Arg	Arg	Lys	Ala	His	Asn	Ser	Gly	Glu	Asp	Ser	Asp	Leu	Lys	Gln
225				230						235				240	
Arg	Arg	Arg	Ser	Arg	Ser	Arg	Cys	Asn	Thr	Ser	Ser	Gly	Ser	Glu	Ser
			245					250					255		
Glu	Asn	Ser	Asn	Arg	Glu	His	Arg	Lys	Lys	Arg	Asn	Arg	Ile	Arg	Gln
		260					265					270			
Glu	Asn	Asp	Met	Val	Asp	Ser	Ala	Pro	Gln	Trp	Glu	Ala	Val	Leu	Arg
	275						280					285			
Arg	Gln	Lys	Glu	Lys	Asn	Gln	Ala	Asp	Pro	Asn	Asn	Arg	Arg	Ser	Arg
	290					295				300					
His	Arg	Ser	Arg	Ser	Arg	Ser	Pro	Asp	Ile	Gln	Ala	Lys	Glu	Glu	Leu
305				310						315				320	
Trp	Lys	His	Ile	Gln	Lys	Glu	Leu	Val	Asp	Pro	Ser	Gly	Leu	Ser	Glu
			325					330					335		
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&lt;210&gt; 3861

&lt;211&gt; 748

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3861

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<210> 3862  
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 <212> PRT  
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<400> 3862  
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 35 40 45  
 Pro Pro Asp Phe Val Asn Lys Phe Leu Pro Arg Glu Leu Ser Ile Leu  
 50 55 60  
 Arg Gly Val Arg His Pro His Ile Val His Val Phe Glu Phe Ile Glu  
 65 70 75 80  
 Val Cys Asn Gly Lys Leu Tyr Ile Val Met Glu Ala Ala Ala Thr Asp  
 85 90 95  
 Leu Leu Gln Ala Val Gln Arg Asn Gly Arg Ile Pro Gly Val Gln Ala  
 100 105 110  
 Arg Asp Leu Phe Ala Gln Ile Ala Gly Ala Val Arg Tyr Leu His Asp  
 115 120 125  
 His His Leu Val His Arg Asp Leu Lys Cys Glu Asn Val Leu Leu Ser  
 130 135 140  
 Pro Asp Glu Arg Arg Val Lys Leu Thr Asp Phe Gly Phe Gly Arg Gln  
 145 150 155 160  
 Ala His Gly Tyr Pro Asp Leu Ser Thr Thr Tyr Cys Gly Ser Ala Val  
 165 170 175  
 Arg Val Thr Arg Val Met His Phe Leu Ser Thr Tyr Cys Leu Pro Gly  
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 Pro Arg Ala His Gly Glu Glu Thr Trp Ala His Pro Cys Arg Lys Arg  
 195 200 205  
 Asp Asn  
 210

<210> 3863  
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 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 3863

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 240  
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 341

&lt;210&gt; 3864

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3864

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1				5				10					15		
Ile	Gly	Trp	Leu	Ala	Trp	Asn	Val	Pro	Ser	Ala	Trp	Thr	Leu	Arg	Glu
			20					25				30			
Leu	Gly	Cys	Gln	Pro	Met	Ala	Arg	Trp	Phe	Ser	Gly	Ser	Leu	Asp	Gln
		35				40				45					
Lys	Asn	Leu	Val	Glu	Ile	Ser	His	Thr	Val	Phe	Phe	Pro	Glu	Ser	Gln
	50					55				60					
Leu	Arg	Ala	Lys	Leu	Lys	Cys	Pro	Gly	Gly	Ser	Cys	Thr	Pro	Gly	Leu
65					70					75				80	
Lys	Lys	Ile	Gly	Ser	Leu	Lys	Val	Ser	Cys	Glu	Glu	Phe	Leu	Leu	Met
			85					90					95		
Gly	Leu	Arg	Tyr	Gln	His	Leu	Asp	Pro	Pro	Ser	Arg				
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&lt;210&gt; 3865

&lt;211&gt; 492

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3865

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 <213> Homo sapiens

<400> 3866  
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<210> 3868

<211> 344

<212> PRT

<213> Homo sapiens

<400> 3868

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Glu	Val	Ser	Ser	His	Asp	Gln	Glu	Met	Asp	Lys	Leu	Lys	Glu	Gln	Tyr
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Asn	Val	Glu	Val	Leu	Ala	Ser	Arg	Ser	Asn	Thr	Ser	Glu	Gln	Asp	Gln
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Ala	Gly	Thr	Glu	Met	Arg	Val	Lys	Leu	Leu	Gln	Glu	Glu	Asn	Glu	Lys
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Arg	Gln	Ile	Glu	Asp	Leu	Lys	Gly	Asp	Glu	Ala	Lys	Ala	Lys	Glu	Thr
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Leu	Lys	Lys	Tyr	Glu	Gly	Glu	Ile	Arg	Gln	Leu	Glu	Glu	Ala	Leu	Val
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His	Ala	Arg	Lys	Glu	Glu	Lys	Glu	Ala	Val	Ser	Ala	Arg	Arg	Ala	Leu
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Glu	Asn	Glu	Leu	Glu	Ala	Ala	Gln	Gly	Asn	Leu	Ser	Gln	Thr	Thr	Gln
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Glu	Gln	Lys	Gln	Leu	Ser	Glu	Lys	Leu	Lys	Glu	Glu	Ser	Glu	Gln	Lys



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<212> PRT  
<213> Homo sapiens

<400> 3870  
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Pro Gly Trp Gly Thr Val Cys Gly His Glu Ala Arg Pro Pro Pro Ala  
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 Arg Glu Ser Val Asp Ser Arg Asp Ser Ser His Ser Arg Glu Arg Ser  
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<210> 3874

&lt;211&gt; 289

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3874

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Glu Ala Tyr His Leu Ser Phe Glu Arg Arg Gln Lys Ser Ser Glu Ala
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Pro Val Gln Ser Pro Gln Arg Ser Val Asp Ser Ile Ser Gln Glu Ser
          50           55           60
Ser Thr Ser Ser Phe Ser Ser Met Ser Ala Gly Ser Arg Gln Glu Glu
65           70           75           80
Thr Lys Lys Asp Tyr Arg Glu Val Glu Lys Leu Leu Arg Ala Val Ala
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Asp Gly Asp Leu Glu Met Val Arg Tyr Leu Leu Glu Trp Thr Glu Glu
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Asp Leu Glu Asp Ala Glu Asp Thr Val Ser Ala Ala Asp Pro Glu Phe
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Cys His Pro Leu Cys Gln Cys Pro Lys Cys Ala Pro Ala Gln Lys Arg
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Leu Ala Lys Val Pro Ala Ser Gly Leu Gly Val Asn Val Thr Ser Gln
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Asp Gly Ser Ser Pro Leu His Val Ala Ala Leu His Gly Arg Ala Asp
          165          170          175
Leu Ile Arg Leu Leu Leu Lys His Gly Ala Asn Ala Gly Ala Arg Asn
          180          185          190
Ala Asp Gln Ala Val Pro Leu His Leu Ala Cys Gln Gln Gly His Phe
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Gln Val Val Lys Cys Leu Leu Asp Ser Asn Ala Lys Pro Asn Lys Lys
          210          215          220
Asp Leu Ser Gly Asn Thr Pro Leu Ile Tyr Ala Cys Ser Gly Gly His
225          230          235          240Glu Leu
Val Ala Leu Leu Leu Gln His Gly Ala Ser Ile Asn Ala
          245          250          255
Leu Thr Ile Arg Gly Asn Thr Ala Leu His Glu Ala Val Ile Glu Lys
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His Val Phe Val Val Glu Leu Leu Leu Leu His Gly Ala Ser Val Arg
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Cys

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&lt;210&gt; 3875

&lt;211&gt; 2640

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3875

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&lt;210&gt; 3876

&lt;211&gt; 824

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3876

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 35 40 45  
 Pro Pro Lys Glu Glu Glu Leu Arg Ala Ala Val Glu Val Leu Arg Gly  
 50 55 60  
 His Gly Leu His Ser Val Leu Glu Glu Trp Phe Val Glu Val Leu Gln  
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 Asn Asp Leu Gln Ala Asn Ile Ser Pro Glu Phe Trp Asn Ala Ile Ser  
 85 90 95  
 Gln Cys Glu Asn Ser Ala Asp Glu Pro Gln Cys Leu Leu Leu Leu Leu  
 100 105 110  
 Asp Ala Phe Gly Leu Leu Glu Ser Arg Leu Asp Pro Tyr Leu Arg Ser  
 115 120 125  
 Leu Glu Leu Leu Glu Lys Trp Thr Arg Leu Gly Leu Leu Met Gly Thr

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Leu Phe Phe Ser Thr Pro Arg Thr Phe	Gln Glu Met Ile Gln Arg Leu				
	165	170	175		
Tyr Gly Cys Phe Leu Arg Val Tyr Met	Gln Ser Lys Arg Lys Gly Glu				
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Gly Gly Thr Asp Pro Glu Leu Glu Gly	Glu Leu Asp Ser Arg Tyr Ala				
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Arg Arg Arg Tyr Tyr Arg Leu Leu Gln	Ser Pro Leu Cys Ala Gly Cys				
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Ser Ser Asp Lys Gln Gln Cys Trp Cys	Arg Gln Ala Leu Glu Gln Phe				
225	230	235	240		
His Gln Leu Ser Gln Val Leu His Arg	Leu Ser Leu Leu Glu Arg Val				
	245	250	255		
Ser Ala Glu Ala Val Thr Thr Thr Leu	His Gln Val Thr Arg Glu Arg				
	260	265	270		
Met Glu Asp Arg Cys Arg Gly Glu Tyr	Glu Arg Ser Phe Leu Arg Glu				
	275	280	285		
Phe His Arg Trp Ile Glu Arg Val Val	Gly Trp Leu Gly Lys Val Phe				
	290	295	300		
Leu Gln Asp Gly Pro Ala Arg Pro Ala	Ser Pro Glu Ala Gly Asn Thr				
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Leu Arg Arg Trp Arg Cys His Val Gln	Arg Phe Phe Tyr Arg Ile Tyr				
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Ala Ser Leu Arg Ile Glu Glu Leu Phe	Ser Ile Val Arg Asp Phe Pro				
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Asp Ser Arg Pro Ala Ile Glu Asp Leu	Lys Tyr Cys Leu Glu Arg Thr				
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Asp Gln Arg Gln Gln Leu Leu Val Ser	Leu Lys Ala Ala Leu Glu Thr				
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Arg Leu Leu His Pro Gly Val Asn Thr	Cys Asp Ile Ile Thr Leu Tyr				
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Asp Thr Val Arg Gln Ile Val Ala Gly	Leu Thr Gly Asp Ser Asp Gly				
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Thr Gly Asp Leu Ala Val Glu Leu Ser	Lys Thr Asp Pro Ala Ser Leu				
	450	455	460		
Glu Thr Gly Gln Asp Ser Glu Asp Asp	Ser Gly Glu Pro Glu Asp Trp				
465	470	475	480		
Val Pro Asp Pro Val Asp Ala Asp Pro	Gly Lys Ser Ser Ser Lys Arg				
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Arg Ser Ser Asp Ile Ile Ser Leu Leu	Val Ser Ile Tyr Gly Ser Lys				
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Asp Leu Phe Ile Asn Glu Tyr Arg Ser	Leu Leu Ala Asp Arg Leu Leu				
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His Gln Phe Ser Phe Ser Pro Glu Arg	Glu Ile Arg Asn Val Glu Leu				
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Leu Lys Leu Arg Phe Gly Glu Ala Pro	Met His Phe Cys Glu Val Met				
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Leu Lys Asp Met Ala Asp Ser Arg Arg	Ile Asn Ala Asn Ile Arg Glu				



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 580 585 590  
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 Lys Leu Glu Val Pro Glu Asp Ile Arg Ala Ala Leu Glu Ala Tyr Cys  
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 Lys Lys Tyr Glu Gln Leu Lys Ala Met Arg Thr Leu Ser Trp Lys His  
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 Asp Gln Ala Ser Trp Thr Leu Glu Leu Ser Lys Ala Val Lys Met  
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 Val Leu Arg Glu Xaa Ser Pro Pro Ala Pro Ser Leu Ser Leu Arg Arg  
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 740 745 750  
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 770 775 780  
 Thr Gly Pro Ala Leu Ala Glu Ile Asp Leu Gln Glu Leu Gln Gly Tyr  
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 Tyr Arg Leu Pro Lys Asn Cys Ser  
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&lt;210&gt; 3877

&lt;211&gt; 1112

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3877

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<210> 3878

<211> 370

<212> PRT

<213> Homo sapiens

<400> 3878

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			20					25					30		
His	Ala	Lys	Lys	Ala	Asn	Gly	Pro	Asn	Tyr	Ile	Gln	Pro	Gln	Lys	Arg
		35					40					45			
Gln	Thr	Thr	Phe	Glu	Ser	Gln	Asp	Arg	Lys	Ala	Val	Ser	Pro	Ser	Ser
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Ser	Glu	Lys	Arg	Ser	Lys	Asn	Pro	Ile	Ser	Arg	Pro	Leu	Glu	Gly	Lys
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Lys	Ser	Leu	Ser	Leu	Ser	Ala	Lys	Thr	His	Asn	Ile	Gly	Phe	Asp	Lys
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Asp	Ser	Cys	His	Ser	Thr	Thr	Lys	Thr	Glu	Ala	Ser	Gln	Glu	Glu	Arg
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Ser	Asp	Ser	Ser	Gly	Leu	Thr	Ser	Leu	Lys	Lys	Ser	Pro	Lys	Val	Ser
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225      230      235      240
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&lt;210&gt; 3879

&lt;211&gt; 2769

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3879

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<211> 116

<212> PRT

<213> Homo sapiens

<400> 3880

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			20					25				30			
Ala	Ile	Asp	Leu	Ser	Arg	Asn	Gln	Phe	Gln	Asp	Phe	Pro	Glu	Gln	Leu
			35				40					45			
Thr	Ala	Leu	Pro	Ala	Leu	Glu	Thr	Ile	Asn	Leu	Glu	Glu	Asn	Glu	Ile
		50				55					60				
Val	Asp	Val	Pro	Val	Glu	Lys	Leu	Ala	Ala	Met	Pro	Ala	Leu	Arg	Ser
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Ile	Asn	Leu	Arg	Phe	Asn	Pro	Leu	Asn	Ala	Glu	Val	Arg	Val	Ile	Ala
				85				90						95	
Pro	Pro	Leu	Ile	Lys	Phe	Asp	Met	Leu	Met	Ser	Pro	Glu	Gly	Ala	Arg
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<210> 3881

<211> 1393

<212> DNA

<213> Homo sapiens

<400> 3881

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&lt;210&gt; 3882

&lt;211&gt; 277

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3882

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Gln	Met	Pro	Ser	Leu	Asn	Trp	Pro	Glu	Ala	Leu	Pro	Pro	Pro	Pro	Pro

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 Arg Glu Thr Pro Ser Pro Thr Pro Ser Tyr Gly Gln Gln Ser Thr Ala  
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 Thr Leu Thr Pro Ser Pro Pro Asp Pro Pro Gln Pro Pro Thr Asp Met  
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 Pro His Leu His Gln Met Pro Arg Arg Val Pro Leu Gly Pro Ser Ser  
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 Ala Gly Leu Gly Ala Gly Pro Ala Ala Ser Pro His Leu Ser Pro Ser  
 165 170 175  
 Pro Ala Pro Ser Thr Ala Ser Ser Ala Pro Gly Arg Thr Trp Gln Gly  
 180 185 190  
 Asn Gly Glu Met Thr Pro Pro Leu Gln Gly Pro Arg Ala Arg Phe Arg  
 195 200 205  
 Lys Lys Pro Lys Ala Leu Pro Tyr Arg Arg Glu Asn Ser Pro Gly Asp  
 210 215 220  
 Leu Pro Pro Pro Pro Leu Pro Pro Pro Glu Xaa Arg Gly Glu Leu Gly  
 225 230 235 240  
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&lt;210&gt; 3883

&lt;211&gt; 943

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3883

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&lt;210&gt; 3884

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3884

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			20					25					30		
Lys	Ala	Arg	Arg	Arg	Thr	Arg	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser
		35					40					45			
Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser
		50				55				60					
Asp	Gly	Arg	Lys	Lys	Arg	Gly	Lys	Tyr	Lys	Asp	Lys	Arg	Arg	Lys	Lys
65					70					75				80	
Lys	Lys	Lys	Arg	Lys	Lys	Leu	Lys	Lys	Lys	Gly	Lys	Glu	Lys	Ala	Glu
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Ala	Gln	Gln	Val	Glu	Ala	Leu	Pro	Gly	Pro	Ser	Leu	Asp	Gln	Trp	His
			100					105					110		
Arg	Ser	Ala	Gly	Glu	Glu	Glu	Asp	Gly	Pro	Val	Leu	Thr	Asp	Glu	Gln
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&lt;210&gt; 3885

&lt;211&gt; 1671

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



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<211> 277

<212> PRT

<213> Homo sapiens

<400> 3886

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		20						25					30		
Gly	Ala	Gly	Gly	Ser	Ile	Thr	Ser	Val	Asp	Phe	Asp	Pro	Ser	Gly	Tyr
		35					40					45			
Gln	Val	Leu	Ala	Ala	Thr	Tyr	Asn	Gln	Ala	Ala	Gln	Leu	Trp	Lys	Val
		50				55					60				
Gly	Glu	Ala	Gln	Ser	Lys	Glu	Thr	Leu	Ser	Gly	His	Lys	Asp	Lys	Val
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Thr	Ala	Ala	Lys	Phe	Lys	Leu	Thr	Arg	His	Gln	Ala	Val	Thr	Gly	Ser
			85					90						95	
Arg	Asp	Arg	Thr	Val	Lys	Glu	Trp	Asp	Leu	Gly	Arg	Ala	Tyr	Cys	Ser
			100					105					110		
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Ser	Cys	Ser	Arg	Asp	Asn	Thr	Leu	Lys	Val	Ile	Asp	Leu	Arg	Val	Ser
			180					185					190		
Asn	Ile	Arg	Gln	Val	Phe	Arg	Ala	Asp	Gly	Phe	Lys	Cys	Gly	Ser	Asp
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Trp	Thr	Lys	Ala	Val	Phe	Ser	Pro	Asp	Arg	Ser	Tyr	Ala	Leu	Ala	Gly
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Glu	Ser	Arg	Leu	Gln	Gly	Pro	His	Cys	Ala	Ala	Val	Asn	Ala	Val	Ala
			245					250					255		
Trp	Cys	Tyr	Ser	Gly	Ser	His	Met	Val	Ser	Val	Asp	Gln	Gly	Arg	Lys
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<210> 3887

<211> 5612

<212> DNA

<213> Homo sapiens

<400> 3887

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&lt;210&gt; 3888

&lt;211&gt; 1230

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3888

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Ser	Ser	Asp	Lys	Asp	Phe	Arg	Phe	Met	Ala	Thr	Asn	Asp	Leu	Met	Thr
		20						25					30		
Glu	Leu	Gln	Lys	Asp	Ser	Ile	Lys	Leu	Asp	Asp	Asp	Ser	Glu	Arg	Lys
		35					40					45			
Val	Val	Lys	Met	Ile	Leu	Lys	Leu	Leu	Glu	Asp	Lys	Asn	Gly	Glu	Val
	50					55					60				
Gln	Asn	Leu	Ala	Val	Lys	Cys	Leu	Gly	Pro	Leu	Val	Ser	Lys	Val	Lys
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Glu	Tyr	Gln	Val	Glu	Thr	Ile	Val	Asp	Thr	Leu	Cys	Thr	Asn	Met	Leu
			85					90						95	
Ser	Asp	Lys	Glu	Gln	Leu	Arg	Asp	Ile	Ser	Ser	Ile	Gly	Leu	Lys	Thr
		100						105					110		
Val	Ile	Gly	Glu	Leu	Pro	Pro	Ala	Ser	Ser	Gly	Ser	Ala	Leu	Ala	Ala
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Asn	Val	Cys	Lys	Lys	Ile	Thr	Gly	Arg	Leu	Thr	Ser	Ala	Ile	Ala	Lys
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Gln	Glu	Asp	Val	Ser	Val	Gln	Leu	Glu	Ala	Leu	Asp	Ile	Met	Ala	Asp
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Met	Leu	Ser	Arg	Gln	Gly	Gly	Leu	Leu	Val	Asn	Phe	His	Pro	Ser	Ile

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Asn Asp Ser Met Ser Thr Thr Arg Thr Tyr Ile Gln Cys Ile Ala Ala
225      230      235
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245      250      255
Ile Pro Leu Val Val Lys Phe Cys Asn Val Asp Asp Asp Glu Leu Arg
260      265      270
Glu Tyr Cys Ile Gln Ala Phe Glu Ser Phe Val Arg Arg Cys Pro Lys
275      280      285
Glu Val Tyr Pro His Val Ser Thr Ile Ile Asn Ile Cys Leu Lys Tyr
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Asp Glu Tyr Ser Asp Asp Asp Asp Met Ser Trp Lys Val Arg Arg Ala
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Ala Ala Lys Cys Leu Asp Ala Val Val Ser Thr Arg His Glu Met Leu
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Pro Glu Phe Tyr Lys Thr Val Ser Pro Ala Leu Ile Ser Arg Phe Lys
370      375      380
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385      390      395
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Ala Met Glu Gln Gly Glu Thr Pro Leu Thr Met Leu Gln Ser Gln Val
420      425      430
Pro Asn Ile Val Lys Ala Leu His Lys Gln Met Lys Glu Lys Ser Val
435      440      445
Lys Thr Arg Gln Cys Cys Phe Asn Met Leu Thr Glu Leu Val Asn Val
450      455      460
Leu Pro Gly Ala Leu Thr Gln His Ile Pro Val Leu Val Pro Gly Ile
465      470      475
Ile Phe Ser Leu Asn Asp Lys Ser Ser Ser Ser Asn Leu Lys Ile Asp
485      490      495
Ala Leu Ser Cys Leu Tyr Val Ile Leu Cys Asn His Ser Pro Gln Val
500      505      510
Phe His Pro His Val Gln Ala Leu Val Pro Pro Val Val Ala Cys Val
515      520      525
Gly Asp Pro Phe Tyr Lys Ile Thr Ser Glu Ala Leu Leu Val Thr Gln
530      535      540
Gln Leu Val Lys Val Ile Arg Pro Leu Asp Gln Pro Ser Ser Phe Asp
545      550      555
Ala Thr Pro Tyr Ile Lys Asp Leu Phe Thr Cys Thr Ile Lys Arg Leu
565      570      575
Lys Ala Ala Asp Ile Asp Gln Glu Val Lys Glu Arg Ala Ile Ser Cys
580      585      590
Met Gly Gln Ile Ile Cys Asn Leu Gly Asp Asn Leu Gly Ser Asp Leu

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  610              615              620
Arg Leu Thr Thr Val Lys Ala Leu Thr Leu Ile Ala Gly Ser Pro Leu
625              630              635              640
Lys Ile Asp Leu Arg Pro Val Leu Gly Glu Gly Val Pro Ile Leu Ala
      645              650              655
Ser Phe Leu Arg Lys Asn Gln Arg Ala Leu Lys Leu Gly Thr Leu Ser
      660              665              670
Ala Leu Asp Ile Leu Ile Lys Asn Tyr Ser Asp Ser Leu Thr Ala Ala
  675              680              685
Met Ile Asp Ala Val Leu Asp Glu Leu Pro Pro Leu Ile Ser Glu Ser
  690              695              700
Asp Met His Val Ser Gln Met Ala Ile Ser Phe Leu Thr Thr Leu Ala
705              710              715              720
Lys Val Tyr Pro Ser Ser Leu Ser Lys Ile Ser Gly Ser Ile Leu Asn
      725              730              735
Glu Leu Ile Gly Leu Val Arg Ser Pro Leu Leu Gln Gly Gly Ala Leu
      740              745              750
Ser Ala Met Leu Asp Phe Phe Gln Ala Leu Val Val Thr Gly Thr Asn
  755              760              765
Asn Leu Gly Tyr Met Asp Leu Leu Arg Met Leu Thr Gly Pro Val Tyr
  770              775              780
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785              790              795              800
Lys Cys Val Ala Ala Leu Thr Arg Ala Cys Pro Lys Glu Gly Pro Ala
      805              810              815
Val Val Gly Gln Phe Ile Gln Asp Val Lys Asn Ser Arg Ser Thr Asp
  820              825              830
Ser Ile Arg Leu Leu Ala Leu Leu Ser Leu Gly Glu Val Gly His His
  835              840              845
Ile Asp Leu Ser Gly Gln Leu Glu Leu Lys Ser Val Ile Leu Glu Ala
  850              855              860
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      885              890              895
Gln Glu Ile Thr Ser Gln Pro Lys Arg Gln Tyr Leu Leu Leu His Ser
  900              905              910
Leu Lys Glu Ile Ile Ser Ser Ala Ser Val Val Gly Leu Lys Pro Tyr
  915              920              925
Val Glu Asn Ile Trp Ala Leu Leu Lys His Cys Glu Cys Ala Glu
  930              935              940
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945              950              955              960
Ile Asp Pro Glu Thr Leu Leu Pro Arg Leu Lys Gly Tyr Leu Ile Ser
      965              970              975
Gly Ser Ser Tyr Ala Arg Ser Ser Val Val Thr Ala Val Lys Phe Thr
  980              985              990
Ile Ser Asp His Pro Gln Pro Ile Asp Pro Leu Leu Lys Asn Cys Ile
  995              1000              1005
Gly Asp Phe Leu Lys Thr Leu Glu Asp Pro Asp Leu Asn Val Arg Arg
1010              1015              1020
Val Ala Leu Val Thr Phe Asn Ser Ala Ala His Asn Lys Pro Ser Leu

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 Lys Val Arg Lys Glu Leu Ile Arg Glu Val Glu Met Gly Pro Phe Lys  
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 His Thr Val Asp Asp Gly Leu Asp Ile Arg Lys Ala Ala Phe Glu Cys  
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 Phe Leu Asn His Val Glu Asp Gly Leu Lys Asp His Tyr Asp Ile Lys  
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 Ala Val Leu Gln Arg Leu Asp Arg Leu Val Glu Pro Leu Arg Ala Thr  
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&lt;210&gt; 3889

&lt;211&gt; 556

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3889

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&lt;210&gt; 3890

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3890

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His Glu Ala His Asp Gln Gly Gly Trp Asp Ala Arg Gln Ser Ile Ile
      35             40             45
Arg Lys Val Val Asp Pro Glu Thr Gly Arg Thr Arg Leu Ile Lys Gly
      50             55             60
Asp Gly Glu Val Leu Glu Glu Ile Val Thr Lys Glu Arg His Arg Glu
65             70             75             80
Ile Asn Lys Gln Ala Thr Arg Gly Asp Cys Leu Ala Phe Gln Met Arg
      85             90             95
Ala Gly Leu Leu Pro
      100

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&lt;210&gt; 3891

&lt;211&gt; 1687

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3891

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&lt;210&gt; 3892

&lt;211&gt; 179

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3892

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		20						25					30		
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Glu	Glu	Val	Val	Ala	Cys	Ala	Trp	Asp	Gly	Gln	Thr	Tyr	Ile	Ile	Asp
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Phe	Cys	Ala	Gly	Leu	Tyr	Ala	Cys	Lys	Glu	Gly	Arg	Asn	Ser	Pro	Cys
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Gln	Leu	Glu	Arg	Met	Glu	Ser	Thr	Asn	Leu	Val	Lys	Leu	Leu	Glu	Thr
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Lys	Pro	Ser	Thr	Thr	Ala	Cys	Cys	Arg	Ser	Trp	Ala	Trp	Ile	Leu	Thr
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&lt;210&gt; 3893

&lt;211&gt; 1591

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3893

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<211> 334

<212> PRT

<213> Homo sapiens

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<210> 3896

<211> 346

<212> PRT

<213> Homo sapiens

<400> 3896

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			20					25					30	Gln
Pro	Glu	Asp	Thr	Pro	Glu	Asn	Thr	Val	Arg	Arg	Gln	Glu	Gln	Pro
			35				40					45		Ser
Ile	Glu	Ser	Thr	Ser	Pro	Ile	Ser	Arg	Thr	Asp	Glu	Ile	Arg	Lys
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Asn	Thr	Ile	Ser	Glu	Met	Ser	Pro	Lys	Ala	Leu	Val	Asp	Thr	Ser
				85					90					95
Ser	Ser	Asn	Arg	Asp	Ser	Val	Ala	Ser	Ser	Ser	His	Ile	Ala	Gln
			100					105					110	Glu
Ala	Ser	Pro	Arg	Pro	Leu	Leu	Val	Pro	Asp	Glu	Gly	Pro	Thr	Ala
			115				120					125		Leu
Glu	Pro	Pro	Thr	Ser	Ile	Pro	Ser	Ala	Ser	Arg	Lys	Gly	Ser	Ser
			130				135					140		Gly
Ala	Pro	Gln	Thr	Ser	Arg	Met	Pro	Val	Pro	Met	Ser	Ala	Lys	Asn
145					150					155				160
Pro	Gly	Thr	Leu	Asp	Lys	Pro	Gly	Lys	Gln	Ser	Lys	Leu	Gln	Asp
				165					170					175
Arg	Gln	Tyr	Arg	Gln	Ala	Asn	Gly	Ser	Ala	Lys	Lys	Ser	Gly	Gly
			180					185					190	Asp
Phe	Lys	Pro	Thr	Ser	Pro	Ser	Leu	Pro	Ala	Ser	Lys	Ile	Pro	Ala
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			210				215				220			Asp
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			260					265					270	His
Thr	Gly	Lys	Gly	His	His	Leu	Ser	Phe	Ser	Pro	Gln	Ser	Gln	Asn
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Arg	Ala	Pro	Pro	Pro	Leu	Ser	Phe	Ser	Ser	Ser	Pro	Pro	Ser	Pro
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Thr	Pro	Ser	Leu	Thr	Ser	Tyr	Lys	Ala	Gln	Asn	Gly	Ser	Ser	Ser
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<212> PRT

<213> Homo sapiens

<400> 3900

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Cys	Asp	Met	Gln	Glu	Lys	Phe	Arg	His	Asn	Ile	Ala	Tyr	Phe	Pro	Gln
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Val Asp Ala Cys Ser Ser Arg Ser Gln Val Asp Arg Leu Val Ala Leu
      180      185      190
Ala Arg Met Arg Gln Ser Gly Ala Phe Leu Ser Thr Ser Glu Gly Leu
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&lt;210&gt; 3901

&lt;211&gt; 1287

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3901

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<210> 3902

<211> 312

<212> PRT

<213> Homo sapiens

<400> 3902

Met	Leu	Leu	Leu	Leu	Val	Leu	Lys	Leu	Met	Arg	Asp	His	Val	Pro	Pro
1				5					10					15	
Val	His	Pro	Glu	Met	Pro	Pro	Gly	Val	Arg	Leu	Ser	Arg	Gly	Leu	Val
			20					25					30		
Trp	Ala	Ala	Thr	Thr	Ala	Arg	Asn	Ala	Leu	Val	Val	Ser	Phe	Ala	Ala
			35				40					45			
Leu	Val	Ala	Tyr	Ser	Phe	Glu	Val	Thr	Gly	Tyr	Gln	Pro	Phe	Ile	Leu
			50				55				60				
Thr	Gly	Glu	Thr	Ala	Glu	Gly	Leu	Pro	Pro	Val	Arg	Ile	Pro	Pro	Phe
65					70					75				80	
Ser	Val	Thr	Thr	Ala	Asn	Gly	Thr	Ile	Ser	Phe	Thr	Glu	Met	Val	Gln
				85					90					95	
Asp	Met	Gly	Ala	Gly	Leu	Ala	Val	Val	Pro	Leu	Met	Gly	Leu	Leu	Glu
			100					105					110		
Ser	Ile	Ala	Val	Ala	Lys	Ala	Phe	Ala	Ser	Gln	Asn	Asn	Tyr	Arg	Ile
			115				120					125			
Asp	Ala	Asn	Gln	Glu	Leu	Leu	Ala	Ile	Gly	Leu	Thr	Asn	Met	Leu	Gly
			130				135				140				
Ser	Leu	Val	Ser	Ser	Tyr	Pro	Val	Thr	Gly	Ser	Phe	Gly	Arg	Thr	Ala
145					150					155				160	
Val	Asn	Ala	Gln	Ser	Gly	Val	Cys	Thr	Pro	Ala	Gly	Gly	Leu	Val	Thr
				165					170					175	
Gly	Val	Leu	Val	Leu	Leu	Ser	Leu	Asp	Tyr	Leu	Thr	Ser	Leu	Phe	Tyr
			180					185					190		
Tyr	Ile	Pro	Lys	Ser	Ala	Leu	Ala	Val	Ile	Ile	Met	Ala	Val	Ala	
			195				200					205			
Pro	Leu	Phe	Asp	Thr	Lys	Ile	Phe	Arg	Thr	Leu	Trp	Arg	Val	Lys	Arg
			210				215				220				
Leu	Asp	Leu	Leu	Pro	Leu	Cys	Val	Thr	Phe	Leu	Leu	Cys	Phe	Trp	Glu
225					230					235				240	
Val	Gln	Tyr	Gly	Ile	Leu	Ala	Gly	Ala	Leu	Val	Ser	Leu	Leu	Met	Leu

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<210> 3903
<211> 598
<212> DNA
<213> Homo sapiens
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<210> 3904
<211> 199
<212> PRT
<213> Homo sapiens
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<400> 3904															
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1				5					10					15	
Gly	Glu	Ala	Ala	Ala	Phe	Asp	Leu	Arg	Gln	Glu	Ser	Gly	Asn	Asn	Glu
			20					25					30		
Val	Ile	Phe	Met	Ala	Leu	Asp	Leu	Ala	Ser	Leu	Ala	Ser	Val	Arg	Ala
		35					40					45			
Phe	Ala	Thr	Ala	Phe	Leu	Ser	Ser	Glu	Pro	Arg	Leu	Asp	Ile	Leu	Ile
	50					55					60				
His	Asn	Ala	Gly	Ile	Ser	Ser	Cys	Gly	Arg	Thr	Arg	Glu	Ala	Phe	Asn
65					70					75				80	
Leu	Leu	Leu	Arg	Val	Asn	His	Ile	Gly	Pro	Phe	Leu	Leu	Thr	His	Leu

```

      85              90              95
Leu Leu Pro Cys Leu Lys Ala Cys Ala Pro Ser Arg Val Val Val Val
      100              105              110
Ala Ser Ala Ala His Cys Arg Gly Arg Leu Asp Phe Lys Arg Leu Asp
      115              120              125
Arg Pro Val Val Leu Ala Ala Gly Ala Ala Ala Tyr Ala Asp Thr Lys
      130              135              140
Leu Ala Asn Val Leu Phe Ala Arg Glu Leu Ala Asn Gln Leu Glu Ala
145              150              155              160
Thr Gly Val Thr Cys Tyr Ala Ala His Pro Gly Pro Val Asn Ser Glu
      165              170              175
Leu Phe Leu Arg His Val Pro Gly Trp Leu Arg Pro Leu Leu Arg Pro
      180              185              190
Leu Ala Trp Leu Val Pro Arg
      195

```

&lt;210&gt; 3905

&lt;211&gt; 370

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3905

```

ggatcctctg agctgcgctc ggccttctcg gcggcacgca ccacccccct ggagggcacg
60
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120
gccaccggcc agtttcgctg ccgcgtgccc ggcgcctact tcttctcctt caccggctggc
180
aaggccccgc acaagagccc gtcggtgatg ctggtgcgaa accgcgacga ggtgcaggcg
240
ctggccttcg acgagcagcg gcggccaggc gcgcggcgcg cagccagcca gagcgccatg
300
ctgcagctcg actacggcga cacagtgtgg ctgcggctgc atggcgcccc gcagtacgcg
360
ctaggcgcg
370

```

&lt;210&gt; 3906

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3906

```

Gly Ser Ser Glu Leu Arg Ser Ala Phe Ser Ala Ala Arg Thr Thr Pro
1      5      10      15
Leu Glu Gly Thr Ser Glu Met Ala Val Thr Phe Asp Lys Val Tyr Val
      20      25      30
Asn Ile Gly Gly Asp Phe Asp Val Ala Thr Gly Gln Phe Arg Cys Arg
      35      40      45
Val Pro Gly Ala Tyr Phe Phe Ser Phe Thr Ala Gly Lys Ala Pro His
      50      55      60
Lys Ser Pro Ser Val Met Leu Val Arg Asn Arg Asp Glu Val Gln Ala
65      70      75      80
Leu Ala Phe Asp Glu Gln Arg Arg Pro Gly Ala Arg Arg Ala Ala Ser

```

	85		90		95
Gln Ser Ala Met Leu Gln Leu Asp Tyr Gly Asp Thr Val Trp Leu Arg					
	100		105		110
Leu His Gly Ala Pro Gln Tyr Ala Leu Gly Ala					
	115		120		

&lt;210&gt; 3907

&lt;211&gt; 4474

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3907

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 60  
 ccgaagaggg ctggctgcgg cggctctcgt cggtctgccg ttccttgctg gagaatttgg  
 120  
 ccacaaagag ctgccaagat agctggggcca ggaagaaagc gccgcagccc tgaccagac  
 180  
 gctgttgccg accccggggc actctggctg tcgaccaagc ggctcaagat gtctggcggg  
 240  
 gccagtgcc aaggcccaag gagagggccc ccaggactgg aggacaccac tagtaagaag  
 300  
 aagcagaagg atcgagcaaa ccaggagagc aaggatggag atcctaggaa agagacaggg  
 360  
 tctcgatatg ttgccaggc tggctcttgaa cctctggcct cagggtgatcc ttctgcctca  
 420  
 gcctcccatg cagctgggat cacaggctca cgccaccgta cccggctggt ctttccctca  
 480  
 tcgtcagggg cagcatccac tcctcaagag gagcagacca aagagggagc ttgtgaagac  
 540  
 cctcatgate tcttggttac tcccactcca gagttgttgc tcgattggag gcagagtga  
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4380  
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4440  
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4474



<210> 3908  
 <211> 1373  
 <212> PRT  
 <213> Homo sapiens

<400> 3908

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Trp Pro Gln Arg Ala Ala Lys Ile Ala Gly Pro Gly Arg Lys Arg Arg
      20           25           30
Ser Pro Asp Pro Asp Ala Val Ala Asp Pro Gly Ala Leu Trp Leu Ser
      35           40           45
Thr Lys Arg Leu Lys Met Ser Gly Gly Ala Ser Ala Thr Gly Pro Arg
      50           55           60
Arg Gly Pro Pro Gly Leu Glu Asp Thr Thr Ser Lys Lys Lys Gln Lys
65           70           75           80
Asp Arg Ala Asn Gln Glu Ser Lys Asp Gly Asp Pro Arg Lys Glu Thr
      85           90           95
Gly Ser Arg Tyr Val Ala Gln Ala Gly Leu Glu Pro Leu Ala Ser Gly
      100          105          110
Asp Pro Ser Ala Ser Ala Ser His Ala Ala Gly Ile Thr Gly Ser Arg
      115          120          125
His Arg Thr Arg Leu Phe Phe Pro Ser Ser Ser Gly Ser Ala Ser Thr
      130          135          140
Pro Gln Glu Glu Gln Thr Lys Glu Gly Ala Cys Glu Asp Pro His Asp
145          150          155          160
Leu Leu Ala Thr Pro Thr Pro Glu Leu Leu Leu Asp Trp Arg Gln Ser
      165          170          175
Ala Glu Glu Val Ile Val Lys Leu Arg Val Gly Val Gly Pro Leu Gln
      180          185          190
Leu Glu Asp Val Asp Ala Ala Phe Thr Asp Thr Asp Cys Val Val Arg
      195          200          205
Phe Ala Gly Gly Gln Gln Trp Gly Gly Val Phe Tyr Ala Glu Ile Lys
      210          215          220
Ser Ser Cys Ala Lys Val Gln Thr Arg Lys Gly Ser Leu Leu His Leu
225          230          235          240
Thr Leu Pro Lys Lys Val Pro Met Leu Thr Trp Pro Ser Leu Leu Val
      245          250          255
Glu Ala Asp Glu Gln Leu Cys Ile Pro Pro Leu Asn Ser Gln Thr Cys
      260          265          270
Leu Leu Gly Ser Glu Glu Asn Leu Ala Pro Leu Ala Gly Glu Lys Ala
      275          280          285
Val Pro Pro Gly Asn Asp Pro Val Ser Pro Ala Met Val Arg Ser Arg
      290          295          300
Asn Pro Gly Lys Asp Asp Cys Ala Lys Glu Glu Met Ala Val Ala Ala
305          310          315          320
Asp Ala Ala Thr Leu Val Asp Gly Lys Glu Pro Glu Ser Met Val Asn
      325          330          335
Leu Ala Phe Val Lys Asn Asp Ser Tyr Glu Lys Gly Pro Asp Ser Val
      340          345          350
Val Val His Val Tyr Val Lys Glu Ile Cys Arg Asp Thr Ser Arg Val
      355          360          365
Leu Phe Arg Glu Gln Asp Phe Thr Leu Ile Phe Gln Thr Arg Asp Gly

```

```

      370              375              380
Asn Phe Leu Arg Leu His Pro Gly Cys Gly Pro His Thr Thr Phe Arg
385              390              395              400
Trp Gln Val Lys Leu Arg Asn Leu Ile Glu Pro Glu Gln Cys Thr Phe
      405              410              415
Cys Phe Thr Ala Ser Arg Ile Asp Ile Cys Leu Arg Lys Arg Gln Ser
      420              425              430
Gln Arg Trp Gly Gly Leu Glu Ala Pro Ala Ala Arg Val Gly Gly Ala
      435              440              445
Lys Val Ala Val Pro Thr Gly Pro Thr Pro Leu Asp Ser Thr Pro Pro
      450              455              460
Gly Gly Ala Pro His Pro Leu Thr Gly Gln Glu Glu Ala Arg Ala Val
465              470              475              480
Glu Lys Asp Lys Ser Lys Ala Arg Ser Glu Asp Thr Gly Leu Asp Ser
      485              490              495
Val Ala Thr Arg Thr Pro Met Glu His Val Thr Pro Lys Pro Glu Thr
      500              505              510
His Leu Ala Ser Pro Lys Pro Thr Cys Met Val Pro Pro Met Pro His
      515              520              525
Ser Pro Val Ser Gly Asp Ser Val Glu Glu Glu Glu Glu Glu Lys
      530              535              540
Lys Val Cys Leu Pro Gly Phe Thr Gly Leu Val Asn Leu Gly Asn Thr
545              550              555              560
Cys Phe Met Asn Ser Val Ile Gln Ser Leu Ser Asn Thr Arg Glu Leu
      565              570              575
Arg Asp Phe Phe His Asp Arg Ser Phe Glu Ala Glu Ile Asn Tyr Asn
      580              585              590
Asn Pro Leu Gly Thr Gly Gly Arg Leu Ala Ile Gly Phe Ala Val Leu
      595              600              605
Leu Arg Ala Leu Trp Lys Gly Thr His His Ala Phe Gln Pro Ser Lys
      610              615              620
Leu Lys Ala Ile Val Ala Ser Lys Ala Ser Gln Phe Thr Gly Tyr Ala
625              630              635              640
Gln His Asp Ala Gln Glu Phe Met Ala Phe Leu Leu Asp Gly Leu His
      645              650              655
Glu Asp Leu Asn Arg Ile Gln Asn Lys Pro Tyr Thr Glu Thr Val Asp
      660              665              670
Ser Asp Gly Arg Pro Asp Glu Val Val Ala Glu Glu Ala Trp Gln Arg
      675              680              685
His Lys Met Arg Asn Asp Ser Phe Ile Val Asp Leu Phe Gln Gly Gln
      690              695              700
Tyr Lys Ser Lys Leu Val Cys Pro Val Cys Ala Lys Val Ser Ile Thr
705              710              715              720
Phe Asp Pro Phe Leu Tyr Leu Pro Val Pro Leu Pro Gln Lys Gln Lys
      725              730              735
Val Leu Pro Val Phe Tyr Phe Ala Arg Glu Pro His Ser Lys Pro Ile
      740              745              750
Lys Phe Leu Val Ser Val Ser Lys Glu Asn Ser Thr Ala Ser Glu Val
      755              760              765
Leu Asp Ser Leu Ser Gln Ser Val His Val Lys Pro Glu Asn Leu Arg
      770              775              780
Leu Ala Glu Val Ile Lys Asn Arg Phe His Arg Val Phe Leu Pro Ser
785              790              795              800
His Ser Leu Asp Thr Val Ser Pro Ser Asp Thr Leu Leu Cys Phe Glu

```

805 810 815  
 Leu Leu Ser Ser Glu Leu Ala Lys Glu Arg Val Val Val Leu Glu Val  
 820 825 830  
 Gln Gln Arg Pro Gln Val Pro Ser Val Pro Ile Ser Lys Cys Ala Ala  
 835 840 845  
 Cys Gln Arg Lys Gln Gln Ser Glu Asp Glu Lys Leu Lys Arg Cys Thr  
 850 855 860  
 Arg Cys Tyr Arg Val Gly Tyr Cys Asn Gln Leu Cys Gln Lys Thr His  
 865 870 875 880  
 Trp Pro Asp His Lys Gly Leu Cys Arg Pro Glu Asn Ile Gly Tyr Pro  
 885 890 895  
 Phe Leu Val Ser Val Pro Ala Ser Arg Leu Thr Tyr Ala Arg Leu Ala  
 900 905 910  
 Gln Leu Leu Glu Gly Tyr Ala Arg Tyr Ser Val Ser Val Phe Gln Pro  
 915 920 925  
 Pro Phe Gln Pro Gly Arg Met Ala Leu Glu Ser Gln Ser Pro Gly Cys  
 930 935 940  
 Thr Thr Leu Leu Ser Thr Gly Ser Leu Glu Ala Gly Asp Ser Glu Arg  
 945 950 955 960  
 Asp Pro Ile Gln Pro Pro Glu Leu Gln Leu Val Thr Pro Met Ala Glu  
 965 970 975  
 Gly Asp Thr Gly Leu Pro Arg Val Trp Ala Ala Pro Asp Arg Gly Pro  
 980 985 990  
 Val Pro Ser Thr Ser Gly Ile Ser Ser Glu Met Leu Ala Ser Gly Pro  
 995 1000 1005  
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 Thr Pro Gln Phe Phe Ile Tyr Lys Ile Asp Ser Ser Asn Arg Glu Gln  
 1045 1050 1055  
 Arg Leu Glu Asp Lys Gly Asp Thr Pro Leu Glu Leu Gly Asp Asp Cys  
 1060 1065 1070  
 Ser Leu Ala Leu Val Trp Arg Asn Asn Glu Arg Leu Gln Glu Phe Val  
 1075 1080 1085  
 Leu Val Ala Ser Lys Glu Leu Glu Cys Ala Glu Asp Pro Gly Ser Ala  
 1090 1095 1100  
 Gly Glu Ala Ala Arg Ala Gly His Phe Thr Leu Asp Gln Cys Leu Asn  
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 Leu Phe Thr Arg Pro Glu Val Leu Ala Pro Glu Glu Ala Trp Tyr Cys  
 1125 1130 1135  
 Pro Gln Cys Lys Gln His Arg Glu Ala Ser Lys Gln Leu Leu Leu Trp  
 1140 1145 1150  
 Arg Leu Pro Asn Val Leu Ile Val Gln Leu Lys Arg Phe Ser Phe Arg  
 1155 1160 1165  
 Ser Phe Ile Trp Arg Asp Lys Ile Asn Asp Leu Val Glu Phe Pro Val  
 1170 1175 1180  
 Arg Asn Leu Asp Leu Ser Lys Phe Cys Ile Gly Gln Lys Glu Glu Gln  
 1185 1190 1195 1200  
 Leu Pro Ser Tyr Asp Leu Tyr Ala Val Ile Asn His Tyr Gly Gly Met  
 1205 1210 1215  
 Ile Gly Gly His Tyr Thr Ala Cys Ala Arg Leu Pro Asn Asp Arg Ser  
 1220 1225 1230  
 Ser Gln Arg Ser Asp Val Gly Trp Arg Leu Phe Asp Asp Ser Thr Val

1235	1240	1245
Thr Thr Val Asp Glu Ser Gln Val Val Thr Arg Tyr Ala Tyr Val Leu		
1250	1255	1260
Phe Tyr Arg Arg Arg Asn Ser Pro Val Glu Arg Pro Pro Arg Ala Gly		
1265	1270	1275
His Ser Glu His His Pro Asp Leu Gly Pro Ala Ala Glu Ala Ala Ala		
1285	1290	1295
Ser Gln Ala Ser Arg Ile Trp Gln Glu Leu Glu Ala Glu Glu Glu Pro		
1300	1305	1310
Val Pro Glu Gly Ser Gly Pro Leu Gly Pro Trp Gly Pro Gln Asp Trp		
1315	1320	1325
Val Gly Pro Leu Pro Arg Gly Pro Thr Thr Pro Asp Glu Gly Cys Leu		
1330	1335	1340
Arg Tyr Phe Val Leu Gly Thr Val Ala Ala Leu Val Ala Leu Val Leu		
1345	1350	1355
Asn Val Phe Tyr Pro Leu Val Ser Gln Ser Arg Trp Arg		
1365	1370	

&lt;210&gt; 3909

&lt;211&gt; 2704

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3909

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420  
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Glu Gln Ile Tyr Leu Asn Arg Thr Leu Leu Thr Thr Ile Ser Thr Gln

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&lt;210&gt; 3914

&lt;211&gt; 1435

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3914

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Arg	Leu	Asn	His	Leu	Ser	Phe	Ala	Glu	Leu	Leu	Lys	Pro	Phe	Ser	Arg
		35				40						45			
Leu	Thr	Ser	Glu	Val	His	Met	Arg	Asp	Pro	Asn	Asn	Gln	Leu	His	Val
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Ile	Lys	Asn	Leu	Lys	Ile	Ala	Val	Ser	Asn	Ile	Val	Thr	Gln	Pro	Pro
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Gln	Pro	Gly	Ala	Ile	Arg	Lys	Leu	Leu	Asn	Asp	Val	Val	Ser	Gly	Ser
			85						90					95	
Gln	Pro	Ala	Glu	Gly	Leu	Val	Ala	Asn	Val	Ile	Thr	Ala	Gly	Asp	Tyr
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Asp	Leu	Asn	Ile	Ser	Ala	Thr	Thr	Pro	Trp	Phe	Glu	Ser	Tyr	Arg	Glu
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Thr	Phe	Leu	Gln	Ser	Met	Pro	Ala	Ser	Asp	His	Glu	Phe	Leu	Asn	His
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Tyr	Leu	Ala	Cys	Met	Leu	Val	Ala	Ser	Ser	Ser	Glu	Ala	Glu	Pro	Val
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Glu	Gln	Phe	Ser	Lys	Leu	Ser	Gln	Glu	Gln	His	Arg	Ile	Gln	His	Asn
			165					170					175		
Ser	Asp	Tyr	Ser	Tyr	Pro	Lys	Trp	Phe	Ile	Pro	Asn	Thr	Leu	Lys	Tyr
		180					185					190			
Tyr	Val	Leu	His	Asp	Val	Ser	Ala	Gly	Asp	Glu	Gln	Arg	Ala	Glu	
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Ser	Ile	Tyr	Glu	Glu	Met	Lys	Gln	Lys	Tyr	Gly	Thr	Gln	Gly	Cys	Tyr

210	215	220
Leu Leu Lys Ile Asn Ser Arg Thr Ser Asn Arg Ala Ser Asp Glu Gln		
225	230	235
Ile Pro Asp Pro Trp Ser Gln Tyr Leu Gln Lys Asn Ser Ile Gln Asn		240
	245	250
Gln Glu Ser Tyr Glu Asp Gly Pro Cys Thr Ile Thr Ser Asn Lys Asn		255
	260	265
Ser Asp Asn Asn Leu Leu Ser Leu Asp Gly Leu Asp Asn Glu Val Lys		270
	275	280
Asp Gly Leu Pro Asn Asn Phe Arg Ala His Pro Leu Gln Leu Glu Gln		285
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Ser Ser Asp Pro Ser Asn Ser Ile Asp Gly Pro Asp His Leu Arg Ser		300
305	310	315
Ala Ser Ser Leu His Glu Thr Lys Lys Gly Asn Thr Gly Ile Ile His		320
	325	330
Gly Ala Cys Leu Thr Leu Thr Asp His Asp Arg Ile Arg Gln Phe Ile		335
	340	345
Gln Lys Phe Thr Phe Arg Gly Leu Leu Pro His Ile Glu Lys Thr Ile		350
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Arg Gln Leu Asn Asp Gln Leu Ile Ser Arg Lys Gly Leu Ser Arg Ser		365
	370	375
Leu Phe Ser Ala Thr Lys Lys Trp Phe Ser Gly Ser Lys Val Pro Glu		380
385	390	395
Lys Ser Ile Asn Asp Leu Lys Asn Thr Ser Gly Leu Leu Tyr Pro Pro		400
	405	410
Glu Ala Pro Glu Leu Gln Ile Arg Lys Met Ala Asp Leu Cys Phe Leu		415
	420	425
Val Gln His Tyr Asp Leu Ala Tyr Ser Cys Tyr His Thr Ala Lys Lys		430
	435	440
Asp Phe Leu Asn Asp Gln Ala Met Leu Tyr Ala Ala Gly Ala Leu Glu		445
	450	455
Met Ala Ala Val Ser Ala Phe Leu Gln Pro Gly Ala Pro Arg Pro Tyr		460
465	470	475
Pro Ala His Tyr Met Asp Thr Ala Ile Gln Thr Tyr Arg Asp Ile Cys		480
	485	490
Lys Asn Met Val Leu Ala Glu Arg Cys Val Leu Leu Ser Ala Glu Leu		495
	500	505
Leu Lys Ser Gln Ser Lys Tyr Ser Glu Ala Ala Ala Leu Leu Ile Arg		510
	515	520
Leu Thr Ser Glu Asp Ser Asp Leu Arg Ser Ala Leu Leu Leu Glu Gln		525
	530	535
Ala Ala His Cys Phe Ile Asn Met Lys Ser Pro Met Val Arg Lys Tyr		540
545	550	555
Ala Phe His Met Ile Leu Ala Gly His Arg Phe Ser Lys Ala Gly Gln		560
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Lys Lys His Ala Leu Arg Cys Tyr Cys Gln Ala Met Gln Val Tyr Lys		575
	580	585
Gly Lys Gly Trp Ser Leu Ala Glu Asp His Ile Asn Phe Thr Ile Gly		590
	595	600
Arg Gln Ser Tyr Thr Leu Arg Gln Leu Asp Asn Ala Val Ser Ala Phe		605
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Arg His Ile Leu Ile Asn Glu Ser Lys Gln Ser Ala Ala Gln Gln Gly		620
625	630	635
Ala Phe Leu Arg Glu Tyr Leu Tyr Val Tyr Lys Asn Val Ser Gln Leu		640

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 740 745 750  
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 755 760 765  
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 Lys Tyr Ser Leu Ser Met Ser Val Arg Gly Lys Gln Asp Leu Glu Ile  
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 885 890 895  
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Val Asp Val Glu Asn Thr Asn Thr Ser Glu Ala Gly Val Lys Glu Phe		
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His Ile Val Gln Val Ser Ser Ser Ser Lys His Trp Lys Leu Gln Lys		
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Ser Val Asn Leu Ser Glu Asn Lys Asp Ala Lys Leu Ala Ser Arg Glu		
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Cys Ser Glu Val Asp Leu Asn Ile Val Ile Leu Trp Lys Ala Tyr Val		
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Val Glu Asp Ser Lys Gln Leu Ile Leu Glu Gly Gln His His Val Ile		
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Pro Pro Glu Met Glu Leu Leu Lys Phe Phe Arg Pro Glu Asn Ile Thr		
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Val Ser Ser Arg Pro Ser Val Glu Gln Leu Ser Ser Leu Ile Lys Thr		
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Ser Leu His Tyr Pro Glu Ser Phe Asn His Pro Phe His Gln Lys Ser		
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Leu Cys Leu Val Pro Val Thr Leu Leu Leu Ser Asn Cys Ser Lys Ala		
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Asp Val Asp Val Ile Val Asp Leu Arg His Lys Thr Thr Ser Pro Glu		
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Ala Leu Glu Ile His Gly Ser Phe Thr Trp Leu Gly Gln Thr Gln Tyr		
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Lys Leu Gln Leu Lys Ser Gln Glu Ile His Ser Leu Gln Leu Lys Ala		
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Cys Phe Val His Thr Gly Val Tyr Asn Leu Gly Thr Pro Arg Val Phe		
1395	1400	1405
Ala Lys Leu Ser Asp Gln Val Thr Val Phe Glu Thr Ser Gln Gln Asn		
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&lt;210&gt; 3915

&lt;211&gt; 1802

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3915

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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Leu Glu Lys Arg Gln Glu Gly Arg Ser Ser Thr Gln Thr Leu Glu Asp  
 50 55 60  
 Ser Trp Arg Tyr Glu Glu Thr Ser Glu Asn Glu Ala Val Ala Glu Glu  
 65 70 75 80  
 Glu Glu Glu Glu Val Glu Glu Glu Gly Glu Glu Asp Val Phe Thr Glu  
 85 90 95  
 Lys Ala Ser Pro Asp Met Asp Gly Tyr Pro Ala Leu Lys Val Asp Lys  
 100 105 110  
 Glu Thr Asn Thr Glu Thr Pro Ala Pro Ser Pro Thr Val Val Arg Pro  
 115 120 125  
 Lys Asp Arg Arg Val Gly Thr Pro Ser Gln Gly Pro Phe Leu Arg Gly  
 130 135 140  
 Ser Thr Ile Ile Arg Ser Lys Thr Phe Ser Pro Gly Pro Gln Ser Gln  
 145 150 155 160  
 Tyr Val Cys Arg Leu Asn Arg Ser Asp Ser Asp Ser Ser Thr Leu Ser  
 165 170 175  
 Lys Lys Pro Pro Phe Val Arg Asn Ser Leu Glu Arg Arg Ser Val Arg  
 180 185 190  
 Met Lys Arg Pro Ser Pro Pro Pro Gln Pro Ser Ser Val Lys Ser Leu  
 195 200 205  
 Arg Ser Glu Arg Leu Ile Arg Thr Ser Leu Asp Leu Glu Leu Asp Leu  
 210 215 220  
 Gln Ala Thr Arg Thr Trp His Ser Gln Leu Thr Gln Glu Ile Ser Val  
 225 230 235 240  
 Leu Lys Glu Leu Lys Glu Gln Leu Glu Gln Ala Lys Ser His Gly Glu  
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 Lys Glu Leu Pro Gln Trp Leu Arg Glu Asp Glu Arg Phe Arg Leu Leu  
 260 265 270  
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 275 280 285  
 Glu Leu Gln Thr Asp Lys Met Met Arg Ala Ala Ala Lys Asp Val His  
 290 295 300  
 Arg Leu Arg Gly Gln Ser Cys Lys Glu Pro Pro Glu Val Gln Ser Phe  
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330

335

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<212> DNA  
<213> Homo sapiens

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<212> PRT  
<213> Homo sapiens

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35 40 45  
Met Glu Glu Val Leu Leu Leu Gly Leu Lys Asp Lys Glu Gly Tyr Thr  
50 55 60  
Ser Phe Trp Asn Asp Cys Ile Ser Ser Gly Leu Arg Gly Gly Ile Leu  
65 70 75 80  
Ile Glu Leu Ala Met Arg Gly Arg Ile Tyr Leu Glu Pro Pro Thr Met  
85 90 95  
Arg Lys Lys Arg Leu Leu Asp Arg Lys Val Leu Leu Lys Ser Asp Ser  
100 105 110  
Pro Thr Gly Asp Val Leu Leu Asp Glu Thr Leu Lys His Ile Lys Ala  
115 120 125  
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145 150

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<212> DNA  
<213> Homo sapiens

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<210> 3920  
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<400> 3920

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Leu Thr Gln Glu Arg Asp Tyr Leu Gln Ala Gln His Pro Pro Ser Pro
 35          40          45
Ile Lys Ser Ser Ser Ala Asp Ser Thr Pro Ser Pro Thr Ser Ser Leu
 50          55          60
Ser Ser Glu Asp Lys Gln His Leu Ala Val Glu Leu Ala Asp Thr Lys
 65          70          75          80
Ala Arg Leu Arg Arg Val Arg Gln Glu Leu Glu Asp Lys Thr Glu Gln
 85          90          95
Leu Val Asp Thr Arg His Glu Val Asp Gln Leu Val Leu Glu Leu Gln
 100         105         110
Lys Val Lys Gln Glu Asn Ile Gln Leu Ala Ala Asp Ala Arg Ser Ala
 115         120         125
Arg Ala Tyr Arg Asp Glu Leu Asp Ser Leu Arg Glu Lys Ala Asn Arg
 130         135         140
Val Glu Arg Leu Glu Leu Glu Leu Thr Arg Cys Lys Glu Lys Leu His
 145         150         155         160
Asp Val Asp Phe Tyr Lys Ala Arg Met Glu Glu Leu Arg Glu Asp Asn
 165         170         175
Ile Ile Leu Ile Glu Thr Lys Ala Met Leu Glu Glu Gln Leu Thr Ala
 180         185         190
Ala Arg Ala Arg Gly Asp Lys Val His Glu Leu Glu Lys Glu Asn Leu
 195         200         205
Gln Leu Lys Ser Lys Leu His Asp Leu Glu Leu Asp Arg Asp Thr Asp
 210         215         220
Lys Lys Arg Ile Glu Glu Leu Leu Glu Glu Asn Met Val Leu Glu Ile
 225         230         235         240
Ala Gln Lys Gln Ser Met Asn Glu Ser Ala His Leu Gly Trp Glu Leu
 245         250         255
Glu Gln Leu Ser Lys Asn Ala Asp Leu Ser Asp Ala Ser Arg Lys Ser
 260         265         270
Phe Val Phe Glu Leu Asn Glu Cys Ala Ser Ser Arg Ile Leu Lys Leu
 275         280         285
Glu Lys Glu Asn Gln Ser Leu Gln Ser Thr Ile Gln Gly Leu Arg Asp
 290         295         300
Ala Ser Leu Val Leu Glu Glu Ser Gly Leu Lys Cys Gly Glu Leu Glu
 305         310         315         320
Lys Glu Asn His Gln Leu Ser Lys Lys Ile Glu Lys Leu Gln Thr Gln
 325         330         335
Leu Glu Arg Glu Lys Gln Ser Asn Gln Asp Leu Glu Thr Leu Ser Glu
 340         345         350
Glu Leu Ile Arg Glu Lys Glu Gln Leu Gln Ser Asp Met Glu Thr Leu
 355         360         365
Lys Ala Asp Lys Ala Arg Gln Ile Lys Asp Leu Glu Gln Glu Lys Asp

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370	375	380
His Leu Asn Arg Ala Met Trp Ser Leu Arg Glu Arg Ser Gln Val Ser		
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Ser Glu Ala Arg Met Lys Asp Val Glu Lys Glu Asn Lys Ala Leu His		400
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Gln Thr Val Thr Glu Ala Asn Gly Lys Leu		415
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 <212> DNA  
 <213> Homo sapiens

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 <211> 126  
 <212> PRT  
 <213> Homo sapiens

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 Asp Ser Val Gly Pro Ile Pro Ala Pro Arg Gly Asp Gly Cys Cys Arg  
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 Asp Val Gln Ala Val Glu Gly Ser Arg Glu Trp Ala Trp Arg Ser Ala  
 65 70 75 80  
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<212> DNA  
<213> Homo sapiens

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35 40 45  
Val Ser Gln Thr Lys Ala Glu Gln Asp Ser Asp Asn Lys Ser Ser Thr  
50 55 60  
Glu Ile Pro Leu Glu Thr Cys Cys Ser Ser Glu Leu Lys Gly Gly Gly  
65 70 75 80  
Ser Gly Thr Ser Leu Glu Arg Glu Gln Phe Glu Gly Leu Gly Ser Thr  
85 90 95  
Pro Asp Ala Lys Leu Asp Lys Thr Cys Ile Ser Arg Ala Met Lys Ile  
100 105 110  
Thr Thr Val Asn Ser Val Leu Pro Gln Asn Ser Val Leu Gly Gly Val



115	120	125
Leu Lys Thr Lys Gln Gln Leu Lys Thr Leu Asn His Phe Asp Leu Thr		
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Asn Gly Val Leu Val Glu Ser Leu Ser Glu Glu Pro Leu Pro Ser Leu		
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Arg Arg Gly Arg Lys Arg His Cys Lys Thr Lys His Leu Glu Gln Asn		
165	170	175
Gly Ser Leu Lys Lys Leu Arg Gln Thr Ser Gly Glu Val Gly Leu Ala		
180	185	190
Pro Thr Asp Pro Val Leu Arg Glu Met Glu Gln Lys Leu Gln Gln Glu		
195	200	205
Glu Glu Asp Arg Gln Leu Ala Leu Gln Leu Gln Arg Met Phe Asp Asn		
210	215	220
Glu Arg Arg Thr Val Ser Arg Arg Lys Gly Ser Val Asp Gln Tyr Leu		
225	230	235
Leu Arg Ser Ser Asn Met Ala Gly Gly Arg		
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&lt;210&gt; 3925

&lt;211&gt; 3296

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3925

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&lt;210&gt; 3926

&lt;211&gt; 683

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3926

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Thr	Arg	Pro	Gln	Pro	Val	Leu	Pro	Leu	Leu	Asp	Leu	Asn	Asn	Gln	Ser
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Val	Gly	Ile	Glu	Gly	Gly	Ala	Arg	Lys	Gly	Val	Ser	Gln	Lys	Asn	Asn
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Asp	Leu	Thr	Ser	Cys	Cys	Phe	Ser	Asp	Ala	Lys	Thr	Met	Tyr	Glu	Val
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Phe	Gln	Arg	Gly	Leu	Ala	Val	Ser	Asp	Asn	Gly	Pro	Cys	Leu	Gly	Tyr
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Arg	Lys	Pro	Asn	Gln	Pro	Tyr	Arg	Trp	Leu	Ser	Tyr	Lys	Gln	Val	Ser
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Asp	Arg	Ala	Glu	Tyr	Leu	Gly	Ser	Cys	Leu	Leu	His	Lys	Gly	Tyr	Lys
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Ser	Ser	Pro	Asp	Gln	Phe	Val	Gly	Ile	Phe	Ala	Gln	Asn	Arg	Pro	Glu
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Trp	Ile	Ile	Ser	Glu	Leu	Ala	Cys	Tyr	Thr	Tyr	Ser	Met	Val	Ala	Val
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Pro	Leu	Tyr	Asp	Thr	Leu	Gly	Pro	Glu	Ala	Ile	Val	His	Ile	Val	Asn

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Pro Thr Leu Lys Ala Lys Arg Gly Glu Leu Ser Lys Tyr Phe Arg Thr		
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&lt;210&gt; 3927

&lt;211&gt; 3197

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3927

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<211> 293

<212> PRT

<213> Homo sapiens

<400> 3932

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<211> 4082

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3933

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&lt;210&gt; 3934

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3934

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Pro	Thr														
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 <213> Homo sapiens

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<210> 3936  
 <211> 265  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3936

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      35           40           45
Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr
      50           55           60
Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala
65           70           75           80
Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser
      85           90           95
Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg
      100          105          110
Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly
      115          120          125
Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg
      130          135          140
Arg Gly Gly Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp
145          150          155          160
Cys Gln Cys Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys
      165          170          175
Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Lys
      180          185          190
Gln Pro Trp Leu Cys Leu Ala Trp Gly Gly Gly Gln Ala Val Asp Ile
      195          200          205
Ala Val Trp Leu Leu Gly Met Val Gly Gly Thr Gly Ile Trp Ala Glu
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Gly Gly Gly Asp Ser Leu Ser Arg Glu Gly Gly Trp Gly Gly Arg Ile
225          230          235          240
Gly Gly Phe Pro Arg Thr Gly Gly Arg Leu Pro Gly Ala Ser Tyr Gln
      245          250          255
Pro Arg Arg Gln Lys Cys Pro Val Pro
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&lt;210&gt; 3937

&lt;211&gt; 744

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3937

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<210> 3938  
 <211> 154  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Arg Ala Ala Glu Ala Gly Asn Ala Lys Gly Asp Ala Thr Ala Gly Pro  
 50 55 60  
 Lys Glu Gln Gly Gly Gly Gln Asp Pro Ala Ala Ile Ala Gly His  
 65 70 75 80  
 Ser Ala Gly Gly Ser Asp His Ala Gly Glu Arg Gly Leu Xaa Gly Arg  
 85 90 95  
 Thr Gly Trp Leu Ala Ala Lys Ala Ala Pro Ala Gly Gly His Arg Glu  
 100 105 110  
 Thr Gly Leu Ala Ser Val Gly Ala Gly Pro Trp Leu Gly Arg Arg Asn  
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<210> 3939  
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 <212> DNA  
 <213> Homo sapiens

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<210> 3940

<211> 62

<212> PRT

<213> Homo sapiens

<400> 3940

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Thr	Asp	Arg	Gln	Thr	Gly	Lys	Val	Arg	Trp	Lys	His	Thr	Glu	Asp	Glu
		20					25					30			
Arg	Asp	Arg	Gln	Trp	Glu	Ala	Glu	Leu	Lys	Thr	Val	Lys	Glu	Arg	Ala
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<210> 3941

<211> 2077

<212> DNA

<213> Homo sapiens

<400> 3941

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&lt;210&gt; 3942

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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Gly Ala Arg Ser Gln Ser Thr Pro Ser Ser Asp Thr Leu Pro Pro Ala  
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<210> 3943  
 <211> 1524  
 <212> DNA  
 <213> Homo sapiens

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<210> 3944

<211> 435

<212> PRT

<213> Homo sapiens

<400> 3944

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			20					25					30		
Val	Gly	Thr	Met	Ser	Gln	Val	Leu	Gly	Lys	Pro	Gln	Pro	Gln	Asp	Glu
		35					40				45				
Asp	Asp	Ala	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Glu	Leu	Val	Gly	Leu	Ala
	50				55					60					
Asp	Tyr	Gly	Asp	Gly	Pro	Asp	Ser	Ser	Asp	Ala	Asp	Pro	Asp	Ser	Gly
65					70				75					80	
Thr	Glu	Glu	Gly	Val	Leu	Asp	Phe	Ser	Asp	Pro	Phe	Ser	Thr	Glu	Val
			85					90					95		
Lys	Pro	Arg	Ile	Leu	Leu	Met	Gly	Leu	Arg	Arg	Ser	Gly	Lys	Ser	Ser
			100					105					110		
Ile	Gln	Lys	Val	Val	Phe	His	Lys	Met	Ser	Pro	Asn	Glu	Thr	Leu	Phe
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Leu	Glu	Ser	Thr	Asn	Lys	Ile	Cys	Arg	Glu	Asp	Val	Ser	Asn	Ser	Ser
	130				135						140				
Phe	Val	Asn	Phe	Gln	Ile	Trp	Asp	Phe	Pro	Gly	Gln	Ile	Asp	Phe	Phe
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Asp	Pro	Thr	Phe	Asp	Tyr	Glu	Met	Ile	Phe	Arg	Gly	Thr	Gly	Ala	Leu
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Ile	Phe	Val	Ile	Asp	Ala	Gln	Asp	Asp	Tyr	Met	Glu	Ala	Leu	Thr	Arg
			180					185					190		
Leu	His	Ile	Thr	Val	Ser	Lys	Ala	Tyr	Lys	Val	Asn	Pro	Asp	Met	Asn

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 210 215 220  
 Ile Glu Thr Gln Arg Asp Ile His Gln Arg Ala Asn Asp Asp Leu Ala  
 225 230 235 240  
 Asp Ala Gly Leu Glu Lys Ile His Leu Ser Phe Tyr Leu Thr Ser Ile  
 245 250 255  
 Tyr Asp His Ser Ile Phe Glu Ala Phe Ser Lys Val Val Gln Lys Leu  
 260 265 270  
 Ile Pro Gln Leu Pro Thr Leu Glu Asn Leu Leu Asn Ile Phe Ile Ser  
 275 280 285  
 Asn Ser Gly Ile Glu Lys Ala Phe Leu Phe Asp Val Val Ser Lys Ile  
 290 295 300  
 Tyr Ile Ala Thr Asp Ser Thr Pro Val Asp Met Gln Thr Tyr Glu Leu  
 305 310 315 320  
 Cys Cys Asp Met Ile Asp Val Val Ile Asp Ile Ser Cys Ile Tyr Gly  
 325 330 335  
 Leu Lys Glu Asp Gly Ala Gly Thr Pro Tyr Asp Lys Glu Ser Thr Ala  
 340 345 350  
 Ile Ile Lys Leu Asn Asn Thr Thr Val Leu Tyr Leu Lys Glu Val Thr  
 355 360 365  
 Lys Phe Leu Ala Leu Val Cys Phe Val Arg Glu Glu Ser Phe Glu Arg  
 370 375 380  
 Lys Gly Leu Ile Asp Tyr Asn Phe His Cys Phe Arg Lys Ala Ile His  
 385 390 395 400  
 Glu Val Phe Glu Val Arg Met Lys Val Val Lys Ser Arg Lys Val Gln  
 405 410 415  
 Asn Arg Leu Gln Lys Lys Lys Arg Ala Thr Pro Asn Gly Thr Pro Arg  
 420 425 430  
 Val Leu Leu  
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&lt;210&gt; 3945

&lt;211&gt; 696

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3945

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 <211> 165  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Thr Glu Leu Arg Leu Arg Gln Arg Asp Leu Leu Glu Gln Arg Val Gln  
 50 55 60  
 Gly His Ala Ala Pro Val Gly Ala Gln Asp Phe Gly Asp Glu Ala Ala  
 65 70 75 80  
 His Leu Arg Val Arg His Gly Ala Leu Ala Val Leu Ala Leu Pro Arg  
 85 90 95  
 Arg Gly Thr Arg Phe Arg Gly Asn Arg Lys Ser Lys Leu Thr Ser Val  
 100 105 110  
 Gln Gly Arg Ala Arg Ala Val Leu Leu Leu Gly Ala Pro Gly Val Ser  
 115 120 125  
 Glu Gly Ala Leu Ser Val Ala Val Ser Pro Ala Gln Arg Ser Thr Leu  
 130 135 140  
 Gly Ser Gln Val Lys Arg Leu Asp Leu Thr Asp Arg Val Leu Val Ala  
 145 150 155 160  
 Gly Leu Gln Pro Ala  
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<210> 3947  
 <211> 400  
 <212> DNA  
 <213> Homo sapiens

<400> 3947  
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 180  
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 240  
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<210> 3948  
 <211> 133  
 <212> PRT  
 <213> Homo sapiens

<400> 3948  
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 20 25 30  
 Thr Met Leu Gly Glu Ile Thr His Leu Gln Gly Ile Ile Asp Asp Leu  
 35 40 45  
 Val Val Leu Thr Ala Glu Pro His Lys Leu Pro Pro Ala Ser Glu Gln  
 50 55 60  
 Val Ile Lys Asp Leu Lys Gly Ser Asp Tyr Ser Trp Ser Tyr Gln Thr  
 65 70 75 80  
 Pro Pro Ser Ser Pro Ser Ser Ser Ser Arg Lys Ser Ser Met Cys  
 85 90 95  
 Ser Ala Pro Ser Ser Ser Ser Ala Lys Gly Gly Gly Ser Pro Met  
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 Ala Trp Gly Cys Pro Asn Ile Leu Thr Gln Phe His Leu Ser Leu Pro  
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 Gln Pro Gly Ala Ala  
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<210> 3949  
 <211> 1462  
 <212> DNA  
 <213> Homo sapiens

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 ccaccatctt tctggctgca agagtcaggg gtcagaatgg ggggcagcca ccactgctga  
 180  
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 360  
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 720  
 ctttaattcgt aaggttccct gaacaccctg ggaccattcg gcttcaggaa atacctcgag  
 780  
 gcaccagtg gggatattaa ttggaggatt ttctataatt agttgcattt ctttttgtaa  
 840  
 gtactcggct atttcactct cattgcgaac tattctgggtg agctcttctc ttggatattg  
 900  
 gtctgagaga ggagggaggc cactgtgacc caagtggctg gtctgaaagt aatccagaaa  
 960  
 gatccagaga actcctggac aatccttttc tctctgagt atgctttttg ccttcccata  
 1020  
 ccagtcccca tcttcagtac ggaaattctg agcttcgtca atgacgatgt gttgaatgtg  
 1080  
 ttcaaatttt tctcttagga aagtttcccg ggtctctgct cggcagatat ttctatcact  
 1140  
 gataaagttc ctcagaggct gggtttcaca aacgtagaga attctgtgtg cctcacagt  
 1200  
 aaacacattc ctgatcttct ccatgatttt catggccatg atgttcttcc ctgagccagg  
 1260  
 taagccgtgg acaaacact ctctgttctt gcggaggctt ctggagaata tctcatactg  
 1320  
 ctgggctgtg agcagattta aaacctcaca gccgagctgg tcaactcaaga gagacctgaa  
 1380  
 gccgagtaag acaatcacga gggactgcag cagggcttcc atgtgctggg tgcctgcaag  
 1440  
 gctataggac gcagggtaat cc  
 1462

&lt;210&gt; 3950

&lt;211&gt; 351

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3950

Met	Glu	Ala	Leu	Leu	Gln	Ser	Leu	Val	Ile	Val	Leu	Leu	Gly	Phe	Arg
1				5					10					15	
Ser	Leu	Leu	Ser	Asp	Gln	Leu	Gly	Cys	Glu	Val	Leu	Asn	Leu	Leu	Thr
			20				25						30		
Ala	Gln	Gln	Tyr	Glu	Ile	Phe	Ser	Arg	Ser	Leu	Arg	Lys	Asn	Arg	Glu
		35				40					45				
Leu	Phe	Val	His	Gly	Leu	Pro	Gly	Ser	Gly	Lys	Asn	Ile	Met	Ala	Met
	50				55				60						
Lys	Ile	Met	Glu	Lys	Ile	Arg	Asn	Val	Phe	His	Cys	Glu	Ala	His	Arg
65				70					75					80	
Ile	Leu	Tyr	Val	Cys	Glu	Asn	Gln	Pro	Leu	Arg	Asn	Phe	Ile	Ser	Asp
			85					90					95		
Arg	Asn	Ile	Cys	Arg	Ala	Glu	Thr	Arg	Glu	Thr	Phe	Leu	Arg	Glu	Lys
			100					105					110		
Phe	Glu	His	Ile	Gln	His	Ile	Val	Ile	Asp	Glu	Ala	Gln	Asn	Phe	Arg

115	120	125
Thr Glu Asp Gly Asp Trp Tyr Gly Lys Ala Lys Ser Ile Thr Gln Arg		
130	135	140
Glu Lys Asp Cys Pro Gly Val Leu Trp Ile Phe Leu Asp Tyr Phe Gln		
145	150	155
Thr Ser His Leu Gly His Ser Gly Leu Pro Pro Leu Ser Asp Gln Tyr		
165	170	175
Pro Arg Glu Glu Leu Thr Arg Ile Val Arg Asn Ala Asp Glu Ile Ala		
180	185	190
Glu Tyr Leu Gln Lys Glu Met Gln Leu Ile Ile Glu Asn Pro Pro Ile		
195	200	205
Asn Ile Pro Thr Gly Cys Leu Glu Val Phe Pro Glu Ala Glu Trp Ser		
210	215	220
Gln Gly Val Gln Gly Thr Leu Arg Ile Lys Lys Tyr Leu Thr Val Glu		
225	230	235
Gln Ile Met Thr Cys Val Ala Asp Thr Cys Arg Arg Phe Phe Asp Arg		
245	250	255
Gly Tyr Ser Pro Lys Asp Val Ala Val Leu Val Ser Thr Ala Lys Glu		
260	265	270
Val Glu His Tyr Lys Tyr Glu Leu Leu Lys Ala Met Arg Lys Lys Arg		
275	280	285
Val Val Gln Leu Ser Asp Ala Cys Asp Met Leu Gly Asp His Ile Val		
290	295	300
Leu Asp Ser Val Arg Arg Phe Ser Gly Leu Glu Arg Ser Ile Val Phe		
305	310	315
Gly Ile His Pro Arg Thr Ala Asp Pro Ala Ile Leu Pro Asn Ile Leu		
325	330	335
Ile Cys Leu Ala Ser Arg Ala Lys Gln His Leu Tyr Ile Phe Leu		
340	345	350

&lt;210&gt; 3951

&lt;211&gt; 1012

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3951

ctgggttcgag actccaatcc tgtttcgaat tgctgcttgc tgcccttggy ctggggataa  
60  
tggaagttct ttccttccc aactctttcc agacccaagc actctgggac tcaactcata  
120  
gtccaggagt tccagggtcc ggattatggt ccatggcagc agtccaagca ggaaaccaag  
180  
ccatctactc tgcctccagt ccaacaagcc aacagccttc atacaagcaa aatgaagact  
240  
ttgactaggg tccaaccagt gtttcacttc aagcccacta cggtgggtgac aagctgccag  
300  
ccgaagaatc caagagaact acatagaagg cggaagttgg accctgggaa gatgcatgcc  
360  
aaaatctggt taatgaagac ctcgctcagg agcgggaggg ccgctctgcg agagctccga  
420  
agccgtgaga acttcctcag caagctcaac cgggagctga tcgagaccat ccaggagatg  
480  
gagaacagca cgaccctgca cgtgcggggc ctgctgcagc agcaggacac cctggcgacc  
540

atcatcgaca tcttggagta ctcaaacaag aagaggctgc agcaattgaa atctgagctt  
 600  
 caggagtggg aagaaaagaa gaaatgcaag atgagctatc ttgagcagca ggcagagcag  
 660  
 ctgaatgccca agattgagaa gacccaggag gaagtgaact tcctgagcac ttacatggac  
 720  
 catgagtatt ccatcaagtc tgtccagatc tccactctta tgcgccactg cagcagggtta  
 780  
 aggacagcca gcaggtaggg gagcccctgc cccnttccca ccagactgtg tgggaggcag  
 840  
 gactggtggc caacaccgtt ctgctggctc ccaggatgag ctggatgacc tcggtgagat  
 900  
 gcgcagaaaag gtcctgggaa tccttgctccg acaagattca gaagaagaag aaaaaaatc  
 960  
 tgagttctgt ggtggcggtg agtagccagt tgctgtgtgg gagcggggat cc  
 1012

&lt;210&gt; 3952

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3952

Met	Lys	Thr	Leu	Thr	Arg	Val	Gln	Pro	Val	Phe	His	Phe	Lys	Pro	Thr
1			5						10					15	
Thr	Val	Val	Thr	Ser	Cys	Gln	Pro	Lys	Asn	Pro	Arg	Glu	Leu	His	Arg
		20						25					30		
Arg	Arg	Lys	Leu	Asp	Pro	Gly	Lys	Met	His	Ala	Lys	Ile	Trp	Leu	Met
		35					40					45			
Lys	Thr	Ser	Leu	Arg	Ser	Gly	Arg	Ala	Ala	Leu	Arg	Glu	Leu	Arg	Ser
		50				55					60				
Arg	Glu	Asn	Phe	Leu	Ser	Lys	Leu	Asn	Arg	Glu	Leu	Ile	Glu	Thr	Ile
65				70					75					80	
Gln	Glu	Met	Glu	Asn	Ser	Thr	Thr	Leu	His	Val	Arg	Ala	Leu	Leu	Gln
			85					90					95		
Gln	Gln	Asp	Thr	Leu	Ala	Thr	Ile	Ile	Asp	Ile	Leu	Glu	Tyr	Ser	Asn
		100						105					110		
Lys	Lys	Arg	Leu	Gln	Gln	Leu	Lys	Ser	Glu	Leu	Gln	Glu	Trp	Glu	Glu
		115					120					125			
Lys	Lys	Lys	Cys	Lys	Met	Ser	Tyr	Leu	Glu	Gln	Gln	Ala	Glu	Gln	Leu
		130			135						140				
Asn	Ala	Lys	Ile	Glu	Lys	Thr	Gln	Glu	Glu	Val	Asn	Phe	Leu	Ser	Thr
145					150					155				160	
Tyr	Met	Asp	His	Glu	Tyr	Ser	Ile	Lys	Ser	Val	Gln	Ile	Ser	Thr	Leu
			165					170					175		
Met	Arg	His	Cys	Ser	Arg	Leu	Arg	Thr	Ala	Ser	Arg				
			180					185							

&lt;210&gt; 3953

&lt;211&gt; 2900

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3953

cccaggctca aggcaaatta taagtaggga accaatttga gggaaagaca tgtgaacaga  
60  
gttaaggtac cacgtcctgg gagcgaccag cagccccacc tgaagtccgc atgcaactct  
120  
gacaagctca ggtgcttgtt ttaaggaaag gggctactag agtcttacca acagcgagcc  
180  
caggtgggag atgaaacagg tactcccaa aataggtcat ccgagggagg aaaactgatg  
240  
gagagcacia tgtgtcttga gcgtttttaa tgtttttaag cttttaaatg atttcttcaa  
300  
ggccgagcag cagcagcaaa ggtgtggctt aaaggattaa gggggtttct gctggcacct  
360  
agaatgaagt tactctatta ctaatcaagc cgagaggagg cccactatgc ccccgtttat  
420  
catcctttcc cagttccttt ttgtgtgtca caaacgatg ctcatcaatc ccacctaaag  
480  
caggaggcca ggagcccagc ctcttgtaga aacagcgagg gtataactgc cctcccgttc  
540  
tgcccccaag acgaaggagg actctcggaa gccaaagaa gtttaagaag tctttctgga  
600  
tagagagcag tgcccaggca ggaagccttt cgccggcaga gcggggtcg aggacgagct  
660  
ggagaggaca gaggcgcgat gggcctgctg cagggcctgc tccgagtcg gaagctgctg  
720  
ctggtcgtct gcgtcccgct cctgctgctg cctctgcccg tcctccacc cagcagcgag  
780  
gcctcgtgtg cttacgtgct gatcgtgact gctgtgtact ggggtgtcga ggcagtgcct  
840  
ctgggagctg cagccctggg gccggccttc ctctaccgt tcttcggagt cctccggctc  
900  
aatgaggtgg cggcggagta cttcaagaac accacgctgc tgctggtggg ggtcatctgc  
960  
gtggcggctg ccgtggagaa gtggaacctg cataagcgca ttgctctgcg catggtcttg  
1020  
atggccgggg ccaagccggg catgctgctg ctctgcttca tgtgtgttac cacgttgctg  
1080  
tccatgtggc tgtccaacac ctccaccacc gccatggtga tgcccatcgt ggaggccgtg  
1140  
ctgcaggagc tggtcagtgc tgaggacgag cagctcgtgg cgggcaactc caacaccgaa  
1200  
gagccgaac ccatcagtct ggatgtaaag aacagccaac cttctctgga actcatcttt  
1260  
gtcaatgaag acagggtcaa cgcagacctc accactctga tgcacaacga gaacctgaat  
1320  
ggtgtgcctt cgatcaccaa ccccatcaaa actgcaaacc aacaccaggg caagaagcaa  
1380  
cacccatccc aggaaaagcc acaagtcctg acccccagcc ccaggaagca gaagctgaat  
1440  
agaaagtaca ggtcccacca tgaccagatg atctgcaagt gcctctccct gagcatatcc  
1500  
tactccgcta ccattggcgg cctgaccacc atcatcggca cctccaccag cctcatcttc  
1560  
ctggaacact tcaacaacca gtatccagcc gcagaggtgg tgaactttgg cacctggttc  
1620

ctcttcagct tccccatata cctcatcatg ctgggtggtca gctggttctg gatgcactgg  
 1680  
 ctgttcctgg gctgcaattt taaagagacc tgctctctga gcaagaagaa gaagacccaaa  
 1740  
 aggggaacagt tgtcagagaa gaggatccaa gaagaatatg aaaaactggg agacattagc  
 1800  
 taccagaaaa tggtgactgg atttttcttc atcctgatga ccgtactgtg gtttaccctg  
 1860  
 gagcctggct ttgtccctgg ctgggattct ttctttgaaa agaaaggcta ccgtactgat  
 1920  
 gccacagtct ctgtcttctt tggcttcttc ctcttcctca ttccagcgaa gaagccctgc  
 1980  
 tttgggaaaa agaattgatg agagaaccag gagcactcac tggggaccga gcccatcatc  
 2040  
 acgtggaagg acttccagaa gaccatgccc tgggagattg tcattctggt tgggggaggc  
 2100  
 tatgctctgg cttctggtag caagagctct ggcctctcta catggattgg gaaccagatg  
 2160  
 ttgtccctga gcagccctcc accgtgggct gtcaccctgc tggcatgcat cctcgtgtcc  
 2220  
 attgtcactg agtttgtgag caaccagca accatcacca tcttctgccc catcctgtgc  
 2280  
 agcctgtctg aaacgatgca cattaacccc ctctacaccc tgatcccagt caccatgtgc  
 2340  
 atctcctttg cagtgatgct gcctgtgggc aatcccccta atgccatcgt cttcagctat  
 2400  
 gggcactgcc agatcaaaga tatggtgaaa gctggcctgg gagtcaacgt tattggactg  
 2460  
 gtgatagtaa tgggtggccat caacacctgg ggagttagcc tcttccacct ggacacttac  
 2520  
 ccagcatggg cgagggtcag caacatcact gatcaagcct aacgccaagt gtacaaactg  
 2580  
 gcccaaccac aggagctgcc agtatccagc agtatctgga ccacaggcaa agaaaaccac  
 2640  
 taggaccacc aggagcacac aaccccagac ccacgccgga gggcatccct ccaccagaag  
 2700  
 attccgccac ctcaagtga ctgcaggaat cctccaacaa ccacaaacac atcgttcgct  
 2760  
 gttagtgtct tcttctgccc ctcagcacca cagctcaaga aaacctaaag tttcaatata  
 2820  
 accataggct cacagaaaaa gaaaaagaaa ataaaaatta aattaaaaaa aaagaagaca  
 2880  
 aagaaaaaaa aaaaaaaaaa  
 2900

&lt;210&gt; 3954

&lt;211&gt; 627

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3954

Met Gly Leu Leu Gln Gly Leu Leu Arg Val Arg Lys Leu Leu Leu Val  
 1 5 10 15  
 Val Cys Val Pro Leu Leu Leu Leu Pro Leu Pro Val Leu His Pro Ser

20										25					30					
Ser	Glu	Ala	Ser	Cys	Ala	Tyr	Val	Leu	Ile	Val	Thr	Ala	Val	Tyr	Trp					
35										40					45					
Val	Ser	Glu	Ala	Val	Pro	Leu	Gly	Ala	Ala	Ala	Leu	Val	Pro	Ala	Phe					
50										55					60					
Leu	Tyr	Pro	Phe	Phe	Gly	Val	Leu	Arg	Ser	Asn	Glu	Val	Ala	Ala	Glu					
65	70										75					80				
Tyr	Phe	Lys	Asn	Thr	Thr	Leu	Leu	Leu	Val	Gly	Val	Ile	Cys	Val	Ala					
85										90					95					
Ala	Ala	Val	Glu	Lys	Trp	Asn	Leu	His	Lys	Arg	Ile	Ala	Leu	Arg	Met					
100										105					110					
Val	Leu	Met	Ala	Gly	Ala	Lys	Pro	Gly	Met	Leu	Leu	Leu	Cys	Phe	Met					
115										120					125					
Cys	Cys	Thr	Thr	Leu	Leu	Ser	Met	Trp	Leu	Ser	Asn	Thr	Ser	Thr	Thr					
130										135					140					
Ala	Met	Val	Met	Pro	Ile	Val	Glu	Ala	Val	Leu	Gln	Glu	Leu	Val	Ser					
145	150										155					160				
Ala	Glu	Asp	Glu	Gln	Leu	Val	Ala	Gly	Asn	Ser	Asn	Thr	Glu	Glu	Ala					
165										170					175					
Glu	Pro	Ile	Ser	Leu	Asp	Val	Lys	Asn	Ser	Gln	Pro	Ser	Leu	Glu	Leu					
180										185					190					
Ile	Phe	Val	Asn	Glu	Asp	Arg	Ser	Asn	Ala	Asp	Leu	Thr	Thr	Leu	Met					
195										200					205					
His	Asn	Glu	Asn	Leu	Asn	Gly	Val	Pro	Ser	Ile	Thr	Asn	Pro	Ile	Lys					
210										215					220					
Thr	Ala	Asn	Gln	His	Gln	Gly	Lys	Lys	Gln	His	Pro	Ser	Gln	Glu	Lys					
225	230										235					240				
Pro	Gln	Val	Leu	Thr	Pro	Ser	Pro	Arg	Lys	Gln	Lys	Leu	Asn	Arg	Lys					
245										250					255					
Tyr	Arg	Ser	His	His	Asp	Gln	Met	Ile	Cys	Lys	Cys	Leu	Ser	Leu	Ser					
260										265					270					
Ile	Ser	Tyr	Ser	Ala	Thr	Ile	Gly	Gly	Leu	Thr	Thr	Ile	Ile	Gly	Thr					
275										280					285					
Ser	Thr	Ser	Leu	Ile	Phe	Leu	Glu	His	Phe	Asn	Asn	Gln	Tyr	Pro	Ala					
290										295					300					
Ala	Glu	Val	Val	Asn	Phe	Gly	Thr	Trp	Phe	Leu	Phe	Ser	Phe	Pro	Ile					
305	310										315					320				
Ser	Leu	Ile	Met	Leu	Val	Val	Ser	Trp	Phe	Trp	Met	His	Trp	Leu	Phe					
325										330					335					
Leu	Gly	Cys	Asn	Phe	Lys	Glu	Thr	Cys	Ser	Leu	Ser	Lys	Lys	Lys	Lys					
340										345					350					
Thr	Lys	Arg	Glu	Gln	Leu	Ser	Glu	Lys	Arg	Ile	Gln	Glu	Glu	Tyr	Glu					
355										360					365					
Lys	Leu	Gly	Asp	Ile	Ser	Tyr	Pro	Glu	Met	Val	Thr	Gly	Phe	Phe	Phe					
370										375					380					
Ile	Leu	Met	Thr	Val	Leu	Trp	Phe	Thr	Arg	Glu	Pro	Gly	Phe	Val	Pro					
385	390										395					400				
Gly	Trp	Asp	Ser	Phe	Phe	Glu	Lys	Lys	Gly	Tyr	Arg	Thr	Asp	Ala	Thr					
405										410					415					
Val	Ser	Val	Phe	Leu	Gly	Phe	Leu	Leu	Phe	Leu	Ile	Pro	Ala	Lys	Lys					
420										425					430					
Pro	Cys	Phe	Gly	Lys	Lys	Asn	Asp	Gly	Glu	Asn	Gln	Glu	His	Ser	Leu					
435										440					445					
Gly	Thr	Glu	Pro	Ile	Ile	Thr	Trp	Lys	Asp	Phe	Gln	Lys	Thr	Met	Pro					

450                      455                      460  
 Trp Glu Ile Val Ile Leu Val Gly Gly Gly Tyr Ala Leu Ala Ser Gly  
 465                      470                      475                      480  
 Ser Lys Ser Ser Gly Leu Ser Thr Trp Ile Gly Asn Gln Met Leu Ser  
                     485                      490                      495  
 Leu Ser Ser Leu Pro Pro Trp Ala Val Thr Leu Leu Ala Cys Ile Leu  
                     500                      505                      510  
 Val Ser Ile Val Thr Glu Phe Val Ser Asn Pro Ala Thr Ile Thr Ile  
                     515                      520                      525  
 Phe Leu Pro Ile Leu Cys Ser Leu Ser Glu Thr Met His Ile Asn Pro  
                     530                      535                      540  
 Leu Tyr Thr Leu Ile Pro Val Thr Met Cys Ile Ser Phe Ala Val Met  
 545                      550                      555                      560  
 Leu Pro Val Gly Asn Pro Pro Asn Ala Ile Val Phe Ser Tyr Gly His  
                     565                      570                      575  
 Cys Gln Ile Lys Asp Met Val Lys Ala Gly Leu Gly Val Asn Val Ile  
                     580                      585                      590  
 Gly Leu Val Ile Val Met Val Ala Ile Asn Thr Trp Gly Val Ser Leu  
                     595                      600                      605  
 Phe His Leu Asp Thr Tyr Pro Ala Trp Ala Arg Val Ser Asn Ile Thr  
                     610                      615                      620  
 Asp Gln Ala  
 625

&lt;210&gt; 3955

&lt;211&gt; 522

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3955

nngaattcag aggactatgt ttttgacagt gtttctggga acaactttga atatacccta  
 60  
 gaagcttcaa aatcacttcg acagaagcca ggagacagta ccatgacgta cctgaacaaa  
 120  
 ggccagttct atcccatcac cttgaaggag gtgagcagca gtgaaaatcc atcatcccat  
 180  
 agcaaagttc gaagtgtgat catggtgggt tttgctgaag acaaaagcag agaagatcag  
 240  
 ttaaggcatt ggaagtactg gcaactcccg cagcacaccg ctaaacaag atgcattgac  
 300  
 atagctgact ataaagaaag cttcaacact atcagtaaca tcgaggagat tgcgtataac  
 360  
 gccatttcct tcacatggga catcaacgat gaagcaaagg ttttcatctc tgtgaactgc  
 420  
 ttaagcacag atttctcttc ccagaaggga gtgaaggggt tgctcttaa cattcaagtt  
 480  
 gataacctata gttacaacaa ccgcagcaac aagcctgtgc ac  
 522

&lt;210&gt; 3956

&lt;211&gt; 174

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3956

Xaa Asn Ser Glu Asp Tyr Val Phe Asp Ser Val Ser Gly Asn Asn Phe  
 1 5 10 15  
 Glu Tyr Thr Leu Glu Ala Ser Lys Ser Leu Arg Gln Lys Pro Gly Asp  
 20 25 30  
 Ser Thr Met Thr Tyr Leu Asn Lys Gly Gln Phe Tyr Pro Ile Thr Leu  
 35 40 45  
 Lys Glu Val Ser Ser Ser Glu Asn Pro Ser Ser His Ser Lys Val Arg  
 50 55 60  
 Ser Val Ile Met Val Val Phe Ala Glu Asp Lys Ser Arg Glu Asp Gln  
 65 70 75 80  
 Leu Arg His Trp Lys Tyr Trp His Ser Arg Gln His Thr Ala Lys Gln  
 85 90 95  
 Arg Cys Ile Asp Ile Ala Asp Tyr Lys Glu Ser Phe Asn Thr Ile Ser  
 100 105 110  
 Asn Ile Glu Glu Ile Ala Tyr Asn Ala Ile Ser Phe Thr Trp Asp Ile  
 115 120 125  
 Asn Asp Glu Ala Lys Val Phe Ile Ser Val Asn Cys Leu Ser Thr Asp  
 130 135 140  
 Phe Ser Ser Gln Lys Gly Val Lys Gly Leu Pro Leu Asn Ile Gln Val  
 145 150 155 160  
 Asp Thr Tyr Ser Tyr Asn Asn Arg Ser Asn Lys Pro Val His  
 165 170

&lt;210&gt; 3957

&lt;211&gt; 3891

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3957

nnctgcaggg aagccaatga tgccctcaat gcgtatgtgt gcaaaggcct cccccagcat  
 60  
 gaagaaatct gcctgggcct gtttactctc atcctcactg aacctgccca agcccagaag  
 120  
 tgttaccggg acttagctct ggtgagtcgt gatggcatga atattgtcct gaataaaatc  
 180  
 aaccagatac ttatggagaa gtacctgaag ctgcaggata cctgccgtac tcagttggtg  
 240  
 tggttggtac gggaactggt gaagagtggg gttctgggag ccgatgggtg ttgtatgacg  
 300  
 tttatgaagc agattgcagg tggagatggt acagccaaaa atatctgggt ggcagaaagt  
 360  
 gttctggata tcctgacaga gcaaagggag tgggtcctga agagcagcat cctcattgcc  
 420  
 atggctgttt acacgtacct ccgcctcatc gtggaccacc atgggactgc ccagctccag  
 480  
 gccctgcgac agaaggaagt agacttctgc atctcactgc ttcgggaacg gttcatggaa  
 540  
 tgtctgatga ttggtcggga tctcgtaaga ctacttcaga atgttgctag gataccagaa  
 600  
 tttgaactgc tttgaaaga tattatccat aatcctcagg ccttgagtcc tcagttcaca  
 660  
 ggtatcctac agcttcttca gtcaagaaca tcccgaat tcttagcatg tcgtctaacc  
 720



ccggacatgg agactaaact cctcttcatg acatcccggg tgcgatttgg tcaacaaaag  
780  
cgataccaag attggttcca gcgccagtac ctgtcaactc cagatagtca gtctctgcgc  
840  
tgtgacctca ttcgctacat ctgtggggta gtccaccctt ctaatgaagt actgagttca  
900  
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&lt;210&gt; 3958

&lt;211&gt; 440

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3958

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		35				40						45			
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&lt;210&gt; 3962

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3962

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Thr	Val	Met	Tyr	Ile	Cys	His	Pro	Glu	Ser	Lys	His	Glu	Ile	Leu	Ser

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&lt;210&gt; 3963

&lt;211&gt; 1513

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3963

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&lt;210&gt; 3964

&lt;211&gt; 436

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3964

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			20					25					30		
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<212> DNA
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 2220  
 ccggcaccca taccagcat ggatgctcag gccggccagc ggcgccacgt gtgcacggac  
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 2340  
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 2520  
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 2700  
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 2850

&lt;210&gt; 3966

&lt;211&gt; 782

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3966

Met Gly Pro Pro Leu Ala Pro Arg Pro Ala His Val Pro Gly Glu Ala  
 1 5 10 15  
 Gly Pro Arg Arg Thr Arg Glu Ser Arg Pro Gly Ala Val Ser Phe Ala

```

                20                25                30
Asp Val Ala Val Tyr Phe Ser Pro Glu Glu Trp Glu Cys Leu Arg Pro
   35   40   45
Ala Gln Arg Ala Leu Tyr Arg Asp Val Met Arg Glu Thr Phe Gly His
   50   55   60
Leu Gly Ala Leu Gly Glu Ala Gly Pro Ser Gly Arg Asp Pro Gln Ser
65   70   75   80
Val Gly Phe Ser Val Pro Lys Pro Ala Phe Ile Ser Trp Val Glu Gly
   85   90   95
Glu Val Glu Ala Trp Ser Pro Glu Ala Gln Asp Pro Asp Gly Glu Ser
   100  105  110
Ser Ala Ala Phe Ser Arg Gly Gln Gly Gln Glu Ala Gly Ser Arg Asp
   115  120  125
Gly Asn Glu Glu Lys Glu Arg Leu Lys Lys Cys Pro Lys Gln Lys Glu
   130  135  140
Val Ala His Glu Val Ala Val Lys Glu Trp Trp Pro Ser Val Ala Cys
145   150  155  160
Pro Glu Phe Cys Asn Pro Arg Gln Ser Pro Met Asn Pro Trp Leu Lys
   165  170  175
Asp Thr Leu Thr Arg Arg Leu Pro His Ser Cys Pro Asp Cys Gly Arg
   180  185  190
Asn Phe Ser Tyr Pro Ser Leu Leu Ala Ser His Gln Arg Val His Ser
   195  200  205
Gly Glu Arg Pro Phe Ser Cys Gly Gln Cys Gln Ala Arg Phe Ser Gln
   210  215  220
Arg Arg Tyr Leu Leu Gln His Gln Phe Ile His Thr Gly Glu Lys Pro
225   230  235  240
Tyr Pro Cys Pro Asp Cys Gly Arg Arg Phe Arg Gln Arg Gly Ser Leu
   245  250  255
Ala Ile His Arg Arg Ala His Thr Gly Glu Lys Pro Tyr Ala Cys Ser
   260  265  270
Asp Cys Lys Ser Arg Phe Thr Tyr Pro Tyr Leu Leu Ala Ile His Gln
   275  280  285
Arg Lys His Thr Gly Glu Lys Pro Tyr Ser Cys Pro Asp Cys Ser Leu
   290  295  300
Arg Phe Ala Tyr Thr Ser Leu Leu Ala Ile His Arg Arg Ile His Thr
305   310  315  320
Gly Glu Lys Pro Tyr Pro Cys Pro Asp Cys Gly Arg Arg Phe Thr Tyr
   325  330  335
Ser Ser Leu Leu Leu Ser His Arg Arg Ile His Ser Asp Ser Arg Pro
   340  345  350
Phe Pro Cys Val Glu Cys Gly Lys Gly Phe Lys Arg Lys Thr Ala Leu
   355  360  365
Glu Ala His Arg Trp Ile His Arg Ser Cys Ser Glu Arg Arg Ala Trp
   370  375  380
Gln Gln Ala Val Val Gly Arg Ser Glu Pro Ile Pro Val Leu Gly Gly
385   390  395  400
Lys Asp Pro Pro Val His Phe Arg His Phe Pro Asp Ile Phe Gln Glu
   405  410  415
Phe Cys Gln Gln Arg Leu Gln Asp Arg Gly Val Pro Ser Asn Ala Pro
   420  425  430
Pro Val Pro Gly Gln Ser Pro Arg Ser Phe Phe Arg Asp Arg Arg Gln
   435  440  445
Ser Ser Ala Val Ala Tyr Cys Gly His Arg Gly Val Ser Glu Ala Ser

```

450		455		460
Gly Pro Tyr Ile Phe	Leu Glu Gly Lys Lys	Pro Leu Leu Tyr Phe	Pro	
465	470	475	480	
Asp Thr Pro Pro Pro	Leu Glu Lys Ala Ala	Glu Ala Ala Leu Phe		
	485	490	495	
Lys Gly Lys Trp Asp	Asp Glu Ala Arg Glu Met	Ala Pro Pro Pro Ala		
	500	505	510	
Pro Leu Leu Ala Pro	Arg Pro Gly Glu Thr Arg	Pro Gly Cys Arg Lys		
	515	520	525	
Pro Gly Thr Val Ser	Phe Ala Asp Val Ala Val	Tyr Phe Ser Pro Glu		
	530	535	540	
Glu Trp Gly Cys Leu	Arg Pro Ala Gln Arg Ala	Leu Tyr Arg Asp Val		
545	550	555	560	
Met Gln Glu Thr Tyr	Gly His Leu Gly Ala Leu	Gly Phe Pro Gly Pro		
	565	570	575	
Lys Pro Ala Leu Ile	Ser Trp Met Glu Gln Glu	Ser Glu Ala Trp Ser		
	580	585	590	
Pro Ala Ala Gln Asp	Pro Glu Lys Gly Glu Arg	Leu Gly Gly Ala Arg		
	595	600	605	
Arg Gly Asp Val Pro	Asn Arg Lys Glu Glu Glu	Pro Glu Glu Val Pro		
	610	615	620	
Arg Ala Lys Gly Pro	Arg Lys Ala Pro Val Lys	Glu Ser Pro Glu Val		
625	630	635	640	
Leu Val Glu Arg Asn	Pro Asp Pro Ala Ile Ser	Val Ala Pro Ala Arg		
	645	650	655	
Ala Gln Pro Pro Lys	Asn Ala Ala Trp Asp Pro	Thr Thr Gly Ala Gln		
	660	665	670	
Pro Pro Ala Pro Ile	Pro Ser Met Asp Ala Gln	Ala Gly Gln Arg Arg		
	675	680	685	
His Val Cys Thr Asp	Cys Gly Arg Arg Phe Thr	Tyr Pro Ser Leu Leu		
	690	695	700	
Val Ser His Arg Arg	Met His Ser Gly Glu Arg	Pro Phe Pro Cys Pro		
705	710	715	720	
Glu Cys Gly Met Arg	Phe Lys Arg Lys Phe Ala	Val Glu Ala His Gln		
	725	730	735	
Trp Ile His Arg Ser	Cys Ser Gly Gly Arg Arg	Gly Arg Arg Pro Gly		
	740	745	750	
Ile Arg Ala Val Pro	Arg Ala Pro Val Arg Gly	Asp Arg Asp Pro Pro		
	755	760	765	
Val Leu Phe Arg His	Tyr Pro Asp Ile Phe Glu	Glu Cys Gly		
770	775	780		

&lt;210&gt; 3967

&lt;211&gt; 892

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3967

naccggcccc gacccggcg cgcgcgcggc ggaggacgag gaagagttgt ggcgaggcag

60

atcctgcccc gtggccgcgg ccgtctcgta ggggacaccg tgggtgtttaa ggatggccag

120

tactggatcc gaggccggac ctcagtggac atcatcaaga ctggaggcta caaggtcagc

180

gccctggagg tggagtggca cctgctggcc caccacagca tcacagatgt ggctgtgatt  
 240  
 ggagttccgg atatgacatg gggccagcgg gtcactgctg tggtgaccct ccgagaagga  
 300  
 cactcactgt cccacagga gctcaaagag tgggcccagaa atgtcctggc cccgtacgcg  
 360  
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 420  
 aagaaggcgc tcatacaggca cttccacccc tcatgacccg gcagactggg actgcgggtc  
 480  
 tgggtggggag cagcagacgt ccccttcaca ccgagaacca cgggggcccg tccaagacct  
 540  
 ggctccctt aaacctgaac ccccaaatc aggtcacgta gaatcaagaa ctgtttggga  
 600  
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 660  
 cctgggtgca cctctgcctg gtcacgcgcg acctcatctg tgcagcgcgg tgcagccagc  
 720  
 ccctggcccc acgtgctgag gcacctcccg cccacagtg ccctgcagtt gccaggctct  
 780  
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 840  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
 892

&lt;210&gt; 3968

&lt;211&gt; 151

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3968

Xaa	Pro	Ala	Arg	Pro	Arg	Arg	Ala	Arg	Gly	Gly	Gly	Arg	Gly	Arg	Val
1				5					10					15	
Val	Ala	Arg	Gln	Ile	Leu	Pro	Arg	Gly	Arg	Gly	Arg	Leu	Val	Gly	Asp
			20					25				30			
Thr	Val	Val	Phe	Lys	Asp	Gly	Gln	Tyr	Trp	Ile	Arg	Gly	Arg	Thr	Ser
		35					40					45			
Val	Asp	Ile	Ile	Lys	Thr	Gly	Gly	Tyr	Lys	Val	Ser	Ala	Leu	Glu	Val
		50				55					60				
Glu	Trp	His	Leu	Leu	Ala	His	Pro	Ser	Ile	Thr	Asp	Val	Ala	Val	Ile
					70					75					80
Gly	Val	Pro	Asp	Met	Thr	Trp	Gly	Gln	Arg	Val	Thr	Ala	Val	Val	Thr
				85				90						95	
Leu	Arg	Glu	Gly	His	Ser	Leu	Ser	His	Arg	Glu	Leu	Lys	Glu	Trp	Ala
			100					105					110		
Arg	Asn	Val	Leu	Ala	Pro	Tyr	Ala	Val	Pro	Ser	Glu	Leu	Val	Leu	Val
		115					120					125			
Glu	Glu	Ile	Pro	Arg	Asn	Gln	Met	Gly	Lys	Ile	Asp	Lys	Lys	Ala	Leu
		130				135					140				
Ile	Arg	His	Phe	His	Pro	Ser									
145						150									

&lt;210&gt; 3969

&lt;211&gt; 915

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3969

```

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gtgagtacgg ggcgggggcg aggcattgtc gaggtctctt gcctgtacgc tggaaagtgg
120
ggattgcaac tcggggaggg atggagcacg cgtcgtcgcc tgggaaacgg gtcgacccgc
180
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240
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300
ctgctcccca ggccggcacc caggatgggc gaggtggagg ccccgggccg cttgtggctc
360
gagagccccc ctgggggagc gccccccatc ttctgacctt cggacgggca agccctggtc
420
ctgggcaggg gacccctgac ccaggttacg gaccggaagt gctccagaac tcaagtggag
480
ctggtcgcag atcctgagac ccggacagtg gcagtgaaac aggtatcagt gcctctgcaa
540
gggccagcaa ggcctgggga tgggatttgg ggaggaattg caagccgtca gtgaaggggt
600
acattaggaa aatctgattg gggccgggag tgggtggctca agcctgtaat cccagcactt
660
tgggaggccg aggcggggcg atcgcttgaa cccaggagtt cgagaccagc ctgagcgaca
720
tggtgaaacc tgtctctcta aaaaattagc gggaatggtg gcgcgtcctt gtagttccta
780
atcgggaggg tgaagcggga ggatcccttg agcccagtag gtcaagggtg tagtgagcag
840
tgatcaccac actgtacttc agcctgggtg acagagcgag aacctgtctc aaaaaaagaa
900
aagaaaaaat atggc
915

```

&lt;210&gt; 3970

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3970

```

Met Gly Glu Val Glu Ala Pro Gly Arg Leu Trp Leu Glu Ser Pro Pro
1           5           10           15
Gly Gly Ala Pro Pro Ile Phe Leu Pro Ser Asp Gly Gln Ala Leu Val
20           25           30
Leu Gly Arg Gly Pro Leu Thr Gln Val Thr Asp Arg Lys Cys Ser Arg
35           40           45
Thr Gln Val Glu Leu Val Ala Asp Pro Glu Thr Arg Thr Val Ala Val
50           55           60
Lys Gln Val Ser Val Pro Leu Gln Gly Pro Ala Arg Pro Gly Asp Gly
65           70           75           80
Ile Trp Gly Gly Ile Ala Ser Arg Gln

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85

<210> 3971  
 <211> 433  
 <212> DNA  
 <213> Homo sapiens

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 120  
 ctggggaacg ggtaatcaga gaaaccctca ctcatagggt ggtgcccttt atgcagagac  
 180  
 ttaaaggaag gagggagggt ccctgacaga gagaatggta agtgcaaagg tcctgggtgg  
 240  
 gcttggtgtg aggaagagca aggccagtgt ggctggaaca gagtgagtga aggggagaga  
 300  
 gttgtaagca atgagcttag acaggaaatg gggctctggtt cacatgggaa atggtaggac  
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 420  
 ctaatcacca gaa  
 433

<210> 3972  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 3972  
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 Ser Leu Leu Thr Thr Leu Ser Pro Ser Leu Thr Leu Phe Gln Pro His  
 20 25 30  
 Trp Pro Cys Ser Ser Ser Thr Gln Ala His Pro Gly Pro Leu His Leu  
 35 40 45  
 Pro Phe Ser Leu Ser Gly Asp Leu Pro Pro Ser Phe Lys Ser Leu His  
 50 55 60  
 Lys Gly His His Pro Met Ser Glu Gly Phe Ser Asp Tyr Pro Phe Pro  
 65 70 75 80  
 Ser Arg Ala Leu Pro Ser Met Leu His Phe Phe Pro Arg Ala Leu Asn  
 85 90 95  
 Thr Thr Tyr Leu Ser Phe Ile Phe Ser Leu Ser Phe Phe Cys Leu Leu  
 100 105 110  
 Pro Leu Glu His His Gln Ser Arg  
 115 120

<210> 3973  
 <211> 984  
 <212> DNA  
 <213> Homo sapiens

<400> 3973



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 120  
 tgctccacct acttgagtc cagatattac agggccctg agatcatcct tggtttacca  
 180  
 ttttgtaggg caattgacat gtggtccctg ggctgtgtta ttgcagaatt gttcctgggt  
 240  
 tggccgttat atccaggagc ttcggagtat gatcagattc ggtatatttc acaaacacag  
 300  
 gggttgctg ctgaatattt attaagcgcc gggacaaaga caactagggt tttcaaccgt  
 360  
 gacacggact caccatatcc tttgtggaga ctgaagacac cagatgacca tgaagcagag  
 420  
 acagggatta agtcaaaaga agcaagaaag tacattttca actgtttaga tgatatggcc  
 480  
 caggtgaaca tgacgacaga tttggaaggg agcgacatgt tggtagaaaa ggctgaccgg  
 540  
 cgggagttca ttgacctgtt gaagaagatg ctgaccattg atgctgacaa gagaatcact  
 600  
 ccaatcgaaa ccctgaacca tccctttgtc accatgacac acttactcga ttttccccac  
 660  
 agcacacacg tcaaatcatg tttccagaac atggagatct gcaagcgtcg ggtgaatatg  
 720  
 tatgacacgg tgaaccagag caaaaccctt ttcacacgc acgtggcccc cagcacgtcc  
 780  
 accaacctga ccatgacctt taacaaccag ctgaccactg tccacaacca gccctcagcg  
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 900  
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 984

&lt;210&gt; 3974

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3974

Leu	Gly	Leu	Ile	His	Ala	Asp	Leu	Lys	Pro	Glu	Asn	Ile	Met	Leu	Val
1				5					10					15	
Asp	Pro	Ser	Arg	Gln	Pro	Tyr	Arg	Val	Lys	Val	Ile	Asp	Phe	Gly	Ser
			20					25					30		
Ala	Ser	His	Val	Ser	Lys	Ala	Val	Cys	Ser	Thr	Tyr	Leu	Gln	Ser	Arg
		35					40					45			
Tyr	Tyr	Arg	Ala	Pro	Glu	Ile	Leu	Gly	Leu	Pro	Phe	Cys	Glu	Ala	
	50					55				60					
Ile	Asp	Met	Trp	Ser	Leu	Gly	Cys	Val	Ile	Ala	Glu	Leu	Phe	Leu	Gly
65				70					75					80	
Trp	Pro	Leu	Tyr	Pro	Gly	Ala	Ser	Glu	Tyr	Asp	Gln	Ile	Arg	Tyr	Ile
				85					90					95	
Ser	Gln	Thr	Gln	Gly	Leu	Pro	Ala	Glu	Tyr	Leu	Leu	Ser	Ala	Gly	Thr

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<210> 3975
<211> 593
<212> DNA
<213> Homo sapiens
```

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<400> 3975
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120
gctcttgggg gctcaaggga gcctgggcct ctgccagcct gcaagctgcc tccaactctc
180
agtcaggatt tggatgcccc cagtgcagtc ctgaggccgc cgccccccat cctactatcc
240
tgcttctgag gcgtctcgga atcataggcc tcccgtggaa ggggagcagc aggcgaggtc
300
tgcttgagcc ccacagatgc ccgctcgct gccagactta aaagtctgtg cccctccccg
360
accaccaggg taccagatc ccaggcggct cagccaggcc cagagcccca agagctgggc
420
tgttctctcc aactgggatc tggggtaggg gctgctcccc caagtccctg ggggactgtc
480
tgggacatcc aggccctgtc ttcttgtctt aaccactcac aacagagaac acgatgttct
540

```

gtccacgaaa gaaggcccca cacttctccc atccggcctc cacgtaaacy cgt  
593

<210> 3976

<211> 101

<212> PRT

<213> Homo sapiens

<400> 3976

Met	Gly	Phe	Ser	Leu	Leu	Glu	Gly	Pro	Ala	Ser	Leu	Gln	Pro	Pro	His
1				5				10					15		
Arg	Glu	Ser	Leu	Pro	Leu	His	Ser	Leu	Pro	Arg	Asp	Gly	Ser	Trp	Gly
			20					25				30			
Leu	Lys	Gly	Ala	Trp	Ala	Ser	Ala	Ser	Leu	Gln	Ala	Ala	Ser	Asn	Ser
		35				40					45				
Gln	Ser	Gly	Phe	Gly	Cys	Pro	Gln	Cys	Ser	Pro	Glu	Ala	Ala	Ala	Pro
	50				55					60					
His	Pro	Thr	Ile	Leu	Leu	Arg	Arg	Leu	Gly	Ile	Ile	Gly	Leu	Pro	
65				70				75					80		
Trp	Lys	Gly	Ser	Ser	Arg	Arg	Gly	Leu	Arg	Glu	Pro	His	Arg	Cys	Pro
				85				90						95	
Leu	Ala	Cys	Gln	Thr											
				100											

<210> 3977

<211> 2668

<212> DNA

<213> Homo sapiens

<400> 3977

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120  
ttgtctcggt ggggttgattc ggcacaaacc gcccgaccca ggggcccgtg cgcgtgtgga  
180  
aggggaagca ctcccctcgt ggtcgcctgg aggtgcgctg gaggaggggg tgacataacc  
240  
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300  
cctgggtcca ttttcacctg gaacaagcgg agtggcctgc aggtatcgca ggacttcctt  
360  
ttctccacc ccagtgcgac cagtgtcctg aatcgactct gccggctcgg cacagactat  
420  
attcgcttca ctgagttcat tgaacagtac acgggccatg tgcaacagca ggatcaccat  
480  
ccatctcaac agggccaagg tgggttacat ggaatctacc tgcgggcctt ctgcacaggg  
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600  
ggtgatcccc atctctccat atcacatgac aactacttcc tagaccagtt ccagcttctt  
660  
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720

atcctggaaa cagtctacaa acacagctgt ggggggttgc ctctgttcg aagtgcactg  
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900  
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1620  
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1680  
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1980  
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2100  
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2160  
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2220  
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2280  
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2340

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<210> 3978

<211> 667

<212> PRT

<213> Homo sapiens

<400> 3978

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Phe	Leu	His	Pro	Ser	Glu	Thr	Ser	Val	Leu	Asn	Arg	Leu	Cys	Arg	Leu	35	40	45	
Gly	Thr	Asp	Tyr	Ile	Arg	Phe	Thr	Glu	Phe	Ile	Glu	Gln	Tyr	Thr	Gly	50	55	60	
His	Val	Gln	Gln	Gln	Asp	His	His	Pro	Ser	Gln	Gln	Gly	Gln	Gly	Gly	65	70	75	80
Leu	His	Gly	Ile	Tyr	Leu	Arg	Ala	Phe	Cys	Thr	Gly	Leu	Asp	Ser	Val	85	90	95	
Leu	Gln	Pro	Tyr	Arg	Gln	Ala	Leu	Leu	Asp	Leu	Glu	Gln	Glu	Phe	Leu	100	105	110	
Gly	Asp	Pro	His	Leu	Ser	Ile	Ser	His	Val	Asn	Tyr	Phe	Leu	Asp	Gln	115	120	125	
Phe	Gln	Leu	Leu	Phe	Pro	Ser	Val	Met	Val	Val	Val	Glu	Gln	Ile	Lys	130	135	140	
Ser	Gln	Lys	Ile	His	Gly	Cys	Gln	Ile	Leu	Glu	Thr	Val	Tyr	Lys	His	145	150	155	160
Ser	Cys	Gly	Gly	Leu	Pro	Pro	Val	Arg	Ser	Ala	Leu	Glu	Lys	Ile	Leu	165	170	175	
Ala	Val	Cys	His	Gly	Val	Met	Tyr	Lys	Gln	Leu	Ser	Ala	Trp	Met	Leu	180	185	190	
His	Gly	Leu	Leu	Leu	Asp	Gln	His	Glu	Glu	Phe	Phe	Ile	Lys	Gln	Gly	195	200	205	
Pro	Ser	Ser	Gly	Asn	Val	Ser	Ala	Gln	Pro	Glu	Glu	Asp	Glu	Glu	Asp	210	215	220	
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Leu	Arg	Leu	Ile	Glu	Glu	Glu	Asn	Met	Leu	Ala	Pro	Ser	Leu	Lys	Gln	245	250	255	
Phe	Ser	Leu	Arg	Val	Glu	Ile	Leu	Pro	Ser	Tyr	Ile	Pro	Val	Arg	Val	260	265	270	
Ala	Glu	Lys	Ile	Leu	Phe	Val	Gly	Glu	Ser	Val	Gln	Met	Phe	Glu	Asn				

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 His Lys Val Leu Leu Asp Asp Asp Asn Leu Leu Pro Leu Leu His Leu  
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 Tyr Leu Leu Ser Val Arg Arg Val Gln Ala Glu Leu Gln His Cys Trp  
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 Ala Leu Gln Met Gln Arg Lys His Leu Lys Ser Asn Gln Thr Asp Ala  
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 Ile Lys Trp Arg Leu Arg Asn His Met Ala Phe Leu Val Asp Asn Leu  
 515 520 525  
 Gln Tyr Tyr Leu Gln Val Asp Val Leu Glu Ser Gln Phe Ser Gln Leu  
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 His Asp His Phe Leu Ser Asn Leu Leu Ala Gln Ser Phe Ile Leu Leu  
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&lt;210&gt; 3979

&lt;211&gt; 2746

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3979

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&lt;210&gt; 3980

&lt;211&gt; 478

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3980

Met	Phe	Lys	Phe	His	Gln	Met	Lys	His	Ile	Phe	Glu	Ile	Leu	Asp	Lys
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Met	Arg	Cys	Leu	Arg	Lys	Arg	Ser	Thr	Val	Ser	Phe	Leu	Gly	Val	Leu
			20					25					30		
Val	Ile	Phe	Leu	Leu	Phe	Met	Asn	Leu	Tyr	Ile	Glu	Asp	Ser	Tyr	Val
		35					40					45			
Leu	Glu	Gly	Asp	Lys	Gln	Leu	Ile	Arg	Glu	Thr	Ser	Thr	His	Gln	Leu



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Asn Ser Glu Arg Tyr Val His Thr Phe Lys Asp Leu Ser Asn Phe Ser		
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Gly Ala Ile Asn Val Thr Tyr Arg Tyr Leu Ala Ala Thr Pro Leu Gln		80
	85	90
Arg Lys Arg Tyr Leu Thr Ile Gly Leu Ser Ser Val Lys Arg Lys Lys		95
	100	105
Gly Asn Tyr Leu Leu Glu Thr Ile Lys Ser Ile Phe Glu Gln Ser Ser		110
	115	120
Tyr Glu Glu Leu Lys Glu Ile Ser Val Val Val His Leu Ala Asp Phe		125
	130	135
Asn Ser Ser Trp Arg Asp Ala Met Val Gln Asp Ile Thr Gln Lys Phe		140
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Ala His His Ile Ile Ala Gly Arg Leu Met Val Ile His Ala Pro Glu		160
	165	170
Glu Tyr Tyr Pro Ile Leu Asp Gly Leu Lys Arg Asn Tyr Asn Asp Pro		175
	180	185
Glu Asp Arg Val Lys Phe Arg Ser Lys Gln Asn Val Asp Tyr Ala Phe		190
	195	200
Leu Leu Asn Phe Cys Ala Asn Thr Ser Asp Tyr Tyr Val Met Leu Glu		205
	210	215
Asp Asp Val Arg Cys Ser Lys Asn Phe Leu Thr Ala Ile Lys Lys Val		220
225	230	235
Ile Ala Ser Leu Glu Gly Thr Tyr Trp Val Thr Leu Glu Phe Ser Lys		240
	245	250
Leu Gly Tyr Ile Gly Lys Leu Tyr His Ser His Asp Leu Pro Arg Leu		255
	260	265
Ala His Phe Leu Leu Met Phe Tyr Gln Glu Met Pro Cys Asp Trp Leu		270
	275	280
Leu Thr His Phe Arg Gly Leu Leu Ala Gln Lys Asn Val Ile Arg Phe		285
	290	295
Lys Pro Ser Leu Phe Gln His Met Gly Tyr Tyr Ser Ser Tyr Lys Gly		300
305	310	315
Thr Glu Asn Lys Leu Lys Asp Asp Asp Phe Glu Glu Glu Ser Phe Asp		320
	325	330
Ile Pro Asp Asn Pro Pro Ala Ser Leu Tyr Thr Asn Met Asn Val Phe		335
	340	345
Glu Asn Tyr Glu Ala Ser Lys Ala Tyr Ser Ser Val Asp Glu Tyr Phe		350
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Trp Gly Lys Pro Pro Ser Thr Gly Asp Val Phe Val Ile Val Phe Glu		365
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Asn Pro Ile Ile Ile Lys Lys Ile Lys Val Asn Thr Gly Thr Glu Asp		380
385	390	395
Arg Gln Asn Asp Ile Leu His His Gly Ala Leu Asp Val Gly Glu Asn		400
	405	410
Val Met Pro Ser Lys Gln Arg Arg Gln Cys Ser Ser Tyr Leu Arg Leu		415
	420	425
Gly Glu Phe Lys Asn Gly Asn Phe Glu Met Ser Gly Val Asn Gln Lys		430
	435	440
Ile Pro Phe Asp Ile His Cys Met Arg Ile Tyr Val Thr Lys Thr Gln		445
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<211> 4447  
<212> DNA  
<213> Homo sapiens

<400> 3981  
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&lt;210&gt; 3982

&lt;211&gt; 929

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3982

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&lt;210&gt; 3984

&lt;211&gt; 484

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3984

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<211> 955

<212> PRT

<213> Homo sapiens

<400> 3990

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Arg	Ser	Arg	Ser	Leu	Ser	Arg	Ser	Arg	Lys	Arg	Arg	Leu	Ser	Ser	Arg	45
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Arg	Arg	Pro	Tyr	Tyr	Phe	Arg	Gly	Arg	Asn	Arg	Gly	Phe	Tyr	Pro	Trp	95
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Gly	Gln	Tyr	Asn	Arg	Gly	Gly	Tyr	Gly	Asn	Tyr	Arg	Ser	Asn	Trp	Gln	110
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Asn	Ser	Asp	Lys	Ser	Ser	Ser	Asp	Arg	Ser	Arg	Arg	Ser	Ser	Ser	Ser	160
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Arg	Ser	Ser	Ser	Asn	His	Ser	Arg	Val	Glu	Ser	Ser	Lys	Arg	Lys	Ser	175
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Ala	Lys	Glu	Lys	Lys	Ser	Ser	Ser	Lys	Asp	Ser	Arg	Pro	Ser	Gln	Ala	190
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Lys	Thr	Glu	Asn	Gly	Lys	Asp	Lys	Glu	Gln	Lys	Gln	Thr	Asn	Thr	Asp	

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Lys Pro Phe Arg Gly Ser Gln Ser Pro Lys Arg Tyr Lys Leu Arg Asp		
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Asp Phe Glu Lys Lys Met Ala Asp Phe His Lys Glu Glu Met Asp Asp		
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Gln Asp Lys Asp Lys Ala Lys Gly Arg Lys Glu Ser Glu Phe Asp Asp		
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Glu Pro Lys Phe Met Ser Lys Val Ile Gly Ala Asn Lys Asn Gln Glu		
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Glu Glu Lys Ser Gly Lys Trp Glu Gly Leu Val Tyr Ala Pro Pro Gly		
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Lys Glu Lys Gln Arg Lys Thr Glu Glu Leu Glu Glu Glu Ser Phe Pro		
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Glu Arg Ser Lys Lys Glu Asp Arg Gly Lys Arg Ser Glu Gly Gly His		
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Arg Gly Phe Val Pro Glu Lys Asn Phe Arg Val Thr Ala Tyr Lys Ala		
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Val Gln Glu Lys Ser Ser Ser Pro Pro Pro Arg Lys Thr Ser Glu Ser		
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Arg Asp Lys Leu Gly Ala Lys Gly Asp Phe Pro Thr Gly Lys Ser Ser		
545	550	555
Phe Ser Ile Thr Arg Glu Ala Gln Val Asn Val Arg Met Asp Ser Phe		
565	570	575
Asp Glu Asp Leu Ala Arg Pro Ser Gly Leu Leu Ala Gln Glu Arg Lys		
580	585	590
Leu Cys Arg Asp Leu Val His Ser Asn Lys Lys Glu Gln Glu Phe Arg		
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Ser Ile Phe Gln His Ile Gln Ser Ala Gln Ser Gln Arg Ser Pro Ser		
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Glu Leu Phe Ala Gln His Ile Val Thr Ile Val His His Val Lys Glu		
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His His Phe Gly Ser Ser Gly Met Thr Leu His Glu Arg Phe Thr Lys		
645	650	655
Tyr Leu Lys Arg Gly Thr Glu Gln Glu Ala Ala Lys Asn Lys Lys Ser		
660	665	670
Pro Glu Ile His Arg Arg Ile Asp Ile Ser Pro Ser Thr Phe Arg Lys		
675	680	685
His Gly Leu Ala His Asp Glu Met Lys Ser Pro Arg Glu Pro Gly Tyr		
690	695	700
Lys Ala Glu Gly Lys Tyr Lys Asp Asp Pro Val Asp Leu Arg Leu Asp		
705	710	715
Ile Glu Arg Arg Lys Lys His Lys Glu Arg Asp Leu Lys Arg Gly Lys		
725	730	735
Ser Arg Glu Ser Val Asp Ser Arg Asp Ser Ser His Ser Arg Glu Arg		
740	745	750
Ser Ala Glu Lys Thr Glu Lys Thr His Lys Gly Ser Lys Lys Gln Lys		
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Lys His Arg Arg Ala Arg Asp Arg Ser Arg Ser Ser Ser Ser Ser		
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Gln Ser Ser His Ser Tyr Lys Ala Glu Glu Tyr Thr Glu Glu Thr Glu		

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Pro Phe Glu Pro Ala Pro Tyr Gln Gln Gly Met Tyr Tyr Thr Pro Pro

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      35              40              45
Pro Gln Cys Val Ser Arg Phe Val Arg Pro Pro Pro Ser Ala Pro Glu
      50              55              60
Pro Ala Pro Pro Tyr Leu Asp His Tyr Pro Pro Tyr Leu Gln Glu Arg
      65              70              75              80
Val Val Asn Ser Gln Tyr Gly Thr Gln Pro Gln Gln Tyr Pro Pro Ile
      85              90              95
Tyr Pro Ser His Tyr Asp Gly Arg Arg Val Tyr Pro Ala Pro Ser Tyr
      100             105             110
Thr Arg Glu Glu Ile Phe Arg Glu Ser Pro Ile Pro Ile Glu Ile
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 <212> DNA  
 <213> Homo sapiens

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394

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<210> 3994  
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      20      25      30
Thr Glu Gly Ala Asn Ile Asn Lys Pro Asp Cys Glu Gly Glu Thr Pro
      35      40      45
Ile His Lys Ala Ala Arg Ser Gly Ser Leu Glu Cys Ile Ser Ala Leu
      50      55      60
Val Ala Asn Gly Ala His Val Glu
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 300  
 gccggtgcc atgtgcatga ggcctgcacc ttgatgaca cttctgaggg tgctgtgcac  
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 715

&lt;210&gt; 3996

&lt;211&gt; 235

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3996

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		20					25						30		
Ser	Ser	Ser	Val	Arg	Arg	Thr	Gln	Ala	Ile	Arg	Arg	Arg	His	Asn	Ala
	35					40					45				
Gly	Ser	Asn	Pro	Thr	Pro	Pro	Ala	Ser	Val	Met	Gly	Ser	Pro	Pro	Ser
	50				55					60					
Ser	Leu	Gln	Glu	Ala	Gln	Arg	Gly	Arg	Ala	Ala	Ser	His	Ser	Arg	Ala
65					70				75					80	
Leu	Thr	Leu	Pro	Ser	Ala	Leu	His	Phe	Ala	Ser	Ser	Leu	Leu	Leu	Thr
			85					90					95		
Arg	Ala	Gly	Ala	Asn	Val	His	Glu	Ala	Cys	Thr	Phe	Asp	Asp	Thr	Ser
	100						105					110			
Glu	Gly	Ala	Val	His	Tyr	Phe	Tyr	Asp	Glu	Ser	Gly	Val	Arg	Arg	Ser
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Gln	Gly	Glu	Gln	Thr	Ala	Asn	Gly	Ala	Trp	Asp	Arg	His	Ser	His	Ser
145				150				155						160	
Ser	Ser	Phe	His	Ser	Ala	Asp	Val	Pro	Glu	Ala	Thr	Gly	Gly	Leu	Asn
			165				170						175		
Leu	Leu	Gln	Pro	Arg	Pro	Val	Val	Leu	Gln	Gly	Met	Gln	Val	Arg	Arg

	180		185		190										
Val	Pro	Leu	Glu	Ile	Pro	Glu	Phe	Asp	Leu	Leu	Asp	Gln	Asp	Ser	Leu
	195		200		205										
His	Glu	Ser	Gln	Glu	Gln	Thr	Leu	Met	Glu	Glu	Ala	Pro	Pro	Arg	Ala
	210		215		220										
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&lt;210&gt; 3997

&lt;211&gt; 7484

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3997

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&lt;210&gt; 3998

&lt;211&gt; 2220

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3998

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Glu Ala Glu Ala Phe Ala Leu Tyr His Lys Ala Leu Asp Leu Gln Lys
      35           40           45
His Asp Arg Phe Glu Glu Ser Ala Lys Ala Tyr His Glu Leu Leu Glu
      50           55           60
Ala Ser Leu Leu Arg Glu Ala Val Ser Ser Gly Asp Glu Lys Glu Gly
      65           70           75           80
Leu Lys His Pro Gly Leu Ile Leu Lys Tyr Ser Thr Tyr Lys Asn Leu
      85           90           95
Ala Gln Leu Ala Ala Gln Arg Glu Asp Leu Glu Thr Ala Met Glu Phe
      100          105          110
Tyr Leu Glu Ala Val Met Leu Asp Ser Thr Asp Val Asn Leu Trp Tyr
      115          120          125
Lys Ile Gly His Val Ala Leu Arg Leu Ile Arg Ile Pro Leu Ala Arg
      130          135          140
His Ala Phe Glu Glu Gly Leu Arg Cys Asn Pro Asp His Trp Pro Cys
      145          150          155          160
Leu Asp Asn Leu Ile Thr Val Leu Tyr Thr Leu Ser Asp Tyr Thr Thr
      165          170          175
Cys Leu Tyr Phe Ile Cys Lys Ala Leu Glu Lys Asp Cys Arg Tyr Ser
      180          185          190
Lys Gly Leu Val Leu Lys Glu Lys Ile Phe Glu Glu Gln Pro Cys Leu
      195          200          205
Arg Lys Asp Ser Leu Arg Met Phe Leu Lys Cys Asp Met Ser Ile His
      210          215          220
Asp Val Ser Val Ser Ala Ala Glu Thr Gln Ala Ile Val Asp Glu Ala
      225          230          235          240
Leu Gly Leu Arg Lys Lys Arg Gln Ala Leu Ile Val Arg Glu Lys Glu
      245          250          255
Pro Asp Leu Lys Leu Val Gln Pro Ile Pro Phe Phe Thr Trp Lys Cys
      260          265          270
Leu Gly Glu Ser Leu Leu Ala Met Tyr Asn His Leu Thr Thr Cys Glu
      275          280          285
Pro Pro Arg Pro Ser Leu Gly Lys Arg Ile Asp Leu Ser Asp Tyr Gln
      290          295          300
Asp Pro Ser Gln Pro Leu Glu Ser Ser Met Val Val Thr Pro Val Asn
      305          310          315          320
Val Ile Gln Pro Ser Thr Val Ser Thr Asn Pro Ala Val Ala Val Ala
      325          330          335
Glu Pro Val Val Ser Tyr Thr Ser Val Ala Thr Thr Ser Phe Pro Leu
      340          345          350
His Ser Pro Gly Leu Leu Glu Thr Gly Ala Pro Val Gly Asp Ile Ser
      355          360          365
Gly Gly Asp Lys Ser Lys Lys Gly Val Lys Arg Lys Lys Ile Ser Glu
      370          375          380
Glu Ser Gly Glu Thr Ala Lys Arg Arg Ser Ala Arg Val Arg Asn Thr
      385          390          395          400
Lys Cys Lys Lys Glu Glu Lys Val Asp Phe Gln Glu Leu Leu Met Lys
      405          410          415
Phe Leu Pro Ser Arg Leu Arg Lys Leu Asp Pro Glu Glu Glu Asp Asp

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420 425 430  
 Ser Phe Asn Asn Tyr Glu Val Gln Ser Glu Ala Lys Leu Glu Ser Phe  
 435 440 445  
 Pro Ser Ile Gly Pro Gln Arg Leu Ser Phe Asp Ser Ala Thr Phe Met  
 450 455 460  
 Glu Ser Glu Lys Gln Asp Val His Glu Phe Leu Leu Glu Asn Leu Thr  
 465 470 475 480  
 Asn Gly Gly Ile Leu Glu Leu Met Met Arg Tyr Leu Lys Ala Met Gly  
 485 490 495  
 His Lys Phe Leu Val Arg Trp Pro Pro Gly Leu Ala Glu Val Val Leu  
 500 505 510  
 Ser Val Tyr His Ser Trp Arg Arg His Ser Thr Ser Leu Pro Asn Pro  
 515 520 525  
 Leu Leu Arg Asp Cys Ser Asn Lys His Ile Lys Asp Met Met Leu Met  
 530 535 540  
 Ser Leu Ser Cys Met Glu Leu Gln Leu Asp Gln Trp Leu Leu Thr Lys  
 545 550 555 560  
 Gly Arg Ser Ser Ala Val Ser Pro Arg Asn Cys Pro Ala Gly Met Val  
 565 570 575  
 Asn Gly Arg Phe Gly Pro Asp Phe Pro Gly Thr His Cys Leu Gly Asp  
 580 585 590  
 Leu Leu Gln Leu Ser Phe Ala Ser Ser Gln Arg Asp Leu Phe Glu Asp  
 595 600 605  
 Gly Trp Leu Glu Phe Val Val Arg Val Tyr Trp Leu Lys Ala Arg Phe  
 610 615 620  
 Leu Ala Leu Gln Gly Asp Met Glu Gln Ala Leu Glu Asn Tyr Asp Ile  
 625 630 635 640  
 Cys Thr Glu Met Leu Gln Ser Ser Thr Ala Ile Gln Val Glu Ala Gly  
 645 650 655  
 Ala Glu Arg Arg Asp Ile Val Ile Arg Leu Pro Asn Leu His Asn Asp  
 660 665 670  
 Ser Val Val Ser Leu Glu Glu Ile Asp Lys Asn Leu Lys Ser Leu Glu  
 675 680 685  
 Arg Cys Gln Ser Leu Glu Glu Ile Gln Arg Leu Tyr Glu Ala Gly Asp  
 690 695 700  
 Tyr Lys Ala Val Val His Leu Leu Arg Pro Thr Leu Cys Thr Ser Gly  
 705 710 715 720  
 Phe Asp Arg Ala Lys His Leu Glu Phe Met Thr Ser Ile Pro Glu Arg  
 725 730 735  
 Pro Ala Gln Leu Leu Leu Leu Gln Asp Ser Leu Leu Arg Leu Lys Asp  
 740 745 750  
 Tyr Arg Gln Cys Phe Glu Cys Ser Asp Val Ala Leu Asn Glu Ala Val  
 755 760 765  
 Gln Gln Met Val Asn Ser Gly Glu Ala Ala Ala Lys Glu Glu Trp Val  
 770 775 780  
 Ala Thr Val Thr Gln Leu Leu Met Gly Ile Glu Gln Ala Leu Ser Ala  
 785 790 795 800  
 Asp Ser Ser Gly Ser Ile Leu Lys Val Ser Ser Ser Thr Thr Gly Leu  
 805 810 815  
 Val Arg Leu Thr Asn Asn Leu Ile Gln Val Ile Asp Cys Ser Met Ala  
 820 825 830  
 Val Gln Glu Glu Ala Lys Glu Pro His Val Ser Ser Val Leu Pro Trp  
 835 840 845  
 Ile Ile Leu His Arg Ile Ile Trp Gln Glu Glu Asp Thr Phe His Ser

850 855 860  
 Leu Cys His Gln Gln Gln Leu Gln Asn Pro Ala Glu Glu Gly Met Ser  
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 Glu Thr Pro Met Leu Pro Ser Ser Leu Met Leu Leu Asn Thr Ala His  
 885 890 895  
 Glu Tyr Leu Gly Arg Arg Ser Trp Cys Cys Asn Ser Asp Gly Ala Leu  
 900 905 910  
 Leu Arg Phe Tyr Val Arg Val Leu Gln Lys Glu Leu Ala Ala Ser Thr  
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 Ser Glu Asp Thr His Pro Tyr Lys Glu Glu Leu Glu Thr Ala Leu Glu  
 930 935 940  
 Gln Cys Phe Tyr Cys Leu Tyr Ser Phe Pro Ser Lys Lys Ser Lys Ala  
 945 950 955 960  
 Arg Tyr Leu Glu Glu His Ser Ala Gln Gln Val Asp Leu Ile Trp Glu  
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 Asp Ala Leu Phe Met Phe Glu Tyr Phe Lys Pro Lys Thr Leu Pro Glu  
 980 985 990  
 Phe Asp Ser Tyr Lys Thr Ser Thr Val Ser Ala Asp Leu Ala Asn Leu  
 995 1000 1005  
 Leu Lys Arg Ile Ala Thr Ile Val Pro Arg Thr Glu Arg Pro Ala Leu  
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 Ser Leu Asp Lys Val Ser Ala Tyr Ile Glu Gly Thr Ser Thr Glu Val  
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 Pro Cys Leu Pro Glu Gly Ala Asp Pro Ser Pro Pro Val Val Asn Glu  
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 Leu Tyr Tyr Leu Leu Ala Asp Tyr His Phe Lys Asn Lys Glu Gln Ser  
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 Lys Ala Ile Lys Phe Tyr Met His Asp Ile Cys Ile Cys Pro Asn Arg  
 1075 1080 1085  
 Phe Asp Ser Trp Ala Gly Met Ala Leu Ala Arg Ala Ser Arg Ile Gln  
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 Asp Lys Leu Asn Ser Asn Glu Leu Lys Ser Asp Gly Pro Ile Trp Lys  
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 His Ala Thr Pro Val Leu Asn Cys Phe Arg Arg Ala Leu Glu Ile Asp  
 1125 1130 1135  
 Ser Ser Asn Leu Ser Leu Trp Ile Glu Tyr Gly Thr Met Ser Tyr Ala  
 1140 1145 1150  
 Leu His Ser Phe Ala Ser Arg Gln Leu Lys Gln Trp Arg Gly Glu Leu  
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 Pro Pro Glu Leu Val Gln Gln Met Glu Gly Arg Arg Asp Ser Met Leu  
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 Ala Gly His Tyr Leu His Glu Glu Ala Ala Arg Tyr Pro Lys Lys Ile  
 1235 1240 1245  
 His Tyr His Asn Pro Pro Glu Leu Ala Met Glu Ala Leu Glu Val Tyr  
 1250 1255 1260  
 Phe Arg Leu His Ala Ser Ile Leu Lys Leu Leu Gly Lys Pro Asp Ser  
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 Gly Val Gly Ala Glu Val Leu Val Asn Phe Met Lys Glu Ala Ala Glu

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Thr Leu Pro	Gly Pro Gly Ala	Ser Leu Pro	Ser Ser	Gly Pro Gly	
	1330	1335		1340	
Leu Thr Ser	Pro Pro Tyr Thr	Ala Thr Pro	Ile Asp	His Asp Tyr	Val
1345	1350		1355		1360
Lys Cys Lys	Lys Pro His Gln	Gln Ala Thr	Pro Asp	Asp Arg Ser	Gln
	1365		1370		1375
Asp Ser Thr	Ala Val Ala Leu	Ser Asp Ser	Ser Ser	Thr Gln Asp	Phe
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Glu Lys Arg	Leu Pro Ile Leu	Ser Ser Gln	Ala Gly	Ala Thr Gly	Lys
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Glu Ser Thr	Glu Gly Phe Arg	Ala Ala Glu	Gln Gly	Val Gln Lys	Pro
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Ala Ala Glu	Thr Pro Ala Ser	Ala Cys Ile	Pro Gly	Lys Pro Ser	Ala
	1460		1465		1470
Ser Thr Pro	Thr Leu Trp Asp	Gly Lys Lys	Arg Gly	Asp Leu Pro	Gly
	1475		1480		1485
Glu Pro Val	Ala Phe Pro Gln	Gly Leu Pro	Ala Gly	Ala Glu Glu	Gln
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Arg Gln Phe	Leu Thr Glu Gln	Cys Ile Ala	Ser Phe	Arg Leu Cys	Leu
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Ser Arg Phe	Pro Gln His Tyr	Lys Ser Leu	Tyr Arg	Leu Ala Phe	Leu
	1525		1530		1535
Tyr Thr Tyr	Ser Lys Thr His	Arg Asn Leu	Gln Trp	Ala Arg Asp	Val
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Gln Gly Leu	Phe Cys Glu Arg	Asn Lys Thr	Asn Phe	Phe Asn Gly	Ile
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Trp Arg Ile	Pro Val Asp Glu	Ile Asp Arg	Pro Gly	Ser Phe Ala	Trp
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His Met Asn	Arg Ser Ile Val	Leu Leu Leu	Lys Val	Leu Ala Gln	Leu
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Ala Gln Arg	Ala Phe Ile Leu	Thr Val Lys	Val Leu	Glu Asp Thr	Leu
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Ser Glu Leu	Ala Glu Gly Ser	Glu Arg Pro	Gly Pro	Lys Val Cys	Gly
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Glu Asp Gly	Gln Glu Gly Leu	Pro Gln Pro	Lys Lys	Pro Pro Leu	Ala
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Asp Gly Ser	Gly Pro Gly Pro	Glu Pro Gly	Gly Lys	Val Gly Leu	Leu

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 Pro Pro Leu Leu Pro Gly Arg Pro Ala Arg Asp Arg Gly Pro Glu Ser  
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 Arg Pro Thr Glu Leu Ser Leu Glu Glu Leu Ser Ile Ser Ala Arg Gln  
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 Arg His Ser Pro Gln Val Lys Met Ala Pro Thr Ser Ser Pro Ala Glu  
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 Pro His Cys Trp Pro Ala Glu Ala Ala Leu Gly Thr Gly Ala Glu Pro  
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 Thr Cys Ser Gln Glu Gly Lys Leu Arg Pro Glu Pro Arg Arg Asp Gly  
 2065 2070 2075 2080  
 Glu Ala Gln Glu Ala Ala Ser Glu Thr Gln Pro Leu Ser Ser Pro Pro  
 2085 2090 2095  
 Thr Ala Ala Ser Ser Lys Ala Pro Ser Ser Gly Ser Ala Gln Pro Pro  
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 Glu Gly His Pro Gly Lys Pro Glu Pro Ser Arg Ala Lys Ser Arg Pro  
 2115 2120 2125  
 Leu Pro Asn Met Pro Lys Leu Val Ile Pro Ser Ala Ala Thr Lys Phe  
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 Pro Pro Glu Ile Thr Val Thr Pro Pro Thr Pro Thr Leu Leu Ser Pro

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Lys Gly Ser Ile	Ser Glu Glu Thr	Lys Gln Lys Leu	Lys Ser Ala Ile
	2165	2170	2175
Leu Ser Ala Gln	Ser Ala Ala Asn Val	Arg Lys Glu Ser	Leu Cys Gln
	2180	2185	2190
Pro Ala Leu Glu	Val Leu Glu Thr	Ser Ser Gln Glu	Ser Ser Leu Glu
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Ser Glu Thr Asp	Glu Asp Asp Asp Tyr	Met Asp Ile	
2210	2215	2220	

&lt;210&gt; 3999

&lt;211&gt; 2546

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3999

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&lt;210&gt; 4000

&lt;211&gt; 606

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4000

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Met Gly Leu Pro Val Gly Thr Ala Ala Ile Ala Pro Ile Ile Ala Ala
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Val Lys Asp Gly Lys Ser Ile Thr His Glu Gly Arg Glu Ile Leu Ala
 20           25           30
Glu Glu Leu Cys Thr Pro Pro Asp Pro Gly Ala Ala Phe Val Val Val
 35           40           45
Glu Cys Pro Asp Glu Ser Phe Ile Gln Pro Ile Cys Glu Asn Ala Thr
 50           55           60
Phe Gln Arg Tyr Gln Gly Lys Ala Asp Ala Pro Val Ala Leu Val Val
 65           70           75           80
His Met Ala Pro Ala Ser Val Leu Val Asp Ser Arg Tyr Gln Gln Trp
 85           90           95
Met Glu Arg Phe Gly Pro Asp Thr Gln His Leu Val Leu Asn Glu Asn
100           105           110
Cys Ala Ser Val His Asn Leu Arg Ser His Lys Ile Gln Thr Gln Leu
115           120           125
Asn Leu Ile His Pro Asp Ile Phe Pro Leu Leu Thr Ser Phe Arg Cys
130           135           140
Lys Lys Glu Gly Pro Thr Leu Ser Val Pro Met Val Gln Gly Glu Cys
145           150           155           160
Leu Leu Lys Tyr Gln Leu Arg Pro Arg Arg Glu Trp Gln Arg Asp Ala
165           170           175
Ile Ile Thr Cys Asn Pro Glu Glu Phe Ile Val Glu Ala Leu Gln Leu
180           185           190
Pro Asn Phe Gln Gln Ser Val Gln Glu Tyr Arg Arg Ser Ala Gln Asp
195           200           205
Gly Pro Ala Pro Ala Glu Lys Arg Ser Gln Tyr Pro Glu Ile Ile Phe
210           215           220
Leu Gly Thr Gly Ser Ala Ile Pro Met Lys Ile Arg Asn Val Ser Ala
225           230           235           240
Thr Leu Val Asn Ile Ser Pro Asp Thr Ser Leu Leu Leu Asp Cys Gly
245           250           255
Glu Gly Thr Phe Gly Gln Leu Cys Arg His Tyr Gly Asp Gln Val Asp
260           265           270
Arg Val Leu Gly Thr Leu Ala Ala Val Phe Val Ser His Leu His Ala
275           280           285
Asp His His Thr Gly Leu Pro Ser Ile Leu Leu Gln Arg Glu Arg Ala
290           295           300
Leu Ala Ser Leu Gly Lys Pro Leu His Pro Leu Leu Val Val Ala Pro
305           310           315           320
Asn Gln Leu Lys Ala Trp Leu Gln Gln Tyr His Asn Gln Cys Gln Glu
325           330           335
Val Leu His His Ile Ser Met Ile Pro Ala Lys Cys Leu Gln Glu Gly
340           345           350
Ala Glu Ile Ser Ser Pro Ala Val Glu Arg Leu Ile Ser Ser Leu Leu
355           360           365
Arg Thr Cys Asp Leu Glu Glu Phe Gln Thr Cys Leu Val Arg His Cys
370           375           380
Lys His Ala Phe Gly Cys Ala Leu Val His Thr Ser Gly Trp Lys Val
385           390           395           400
Val Tyr Ser Gly Asp Thr Met Pro Cys Glu Ala Leu Val Arg Met Gly
405           410           415
Lys Asp Ala Thr Leu Leu Ile His Glu Ala Thr Leu Glu Asp Gly Leu

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420 425 430  
 Glu Glu Glu Ala Val Glu Lys Thr His Ser Thr Thr Ser Gln Ala Ile  
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 Ser Gln Arg Tyr Ala Lys Val Pro Leu Phe Ser Pro Asn Phe Ser Glu  
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 Lys Val Gly Val Ala Phe Asp His Met Lys Val Cys Phe Gly Asp Phe  
 485 490 495  
 Pro Thr Met Pro Lys Leu Ile Pro Pro Thr Glu Ser Pro Val Cys Trp  
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 Arg His Arg Gly Asp Gly Gly Ala Gln Gly Glu Ala Gly Ala Ala Ala  
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 Gly Ala Gly Gly Pro Pro Val Gln Gly Ala Gly Arg Arg Pro Gly Gly  
 530 535 540  
 Trp Gly Ala Ser Ala Glu Ala Gly Pro His Arg Gly Ala Thr Gly Gln  
 545 550 555 560  
 Glu Gly Gln Ser Pro Val Lys Ile Trp Glu Thr Leu Asn Ser Glu Gly  
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 <212> DNA  
 <213> Homo sapiens

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 660  
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 720



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&lt;210&gt; 4002

&lt;211&gt; 417

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4002

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			20					25					30		
Leu	Ser	Asp	Ser	Leu	Gly	Val	Ser	Val	Met	Ala	Thr	Asp	Gln	Asp	Ser
		35					40					45			
Tyr	Ser	Thr	Ser	Ser	Thr	Glu	Glu	Glu	Leu	Glu	Gln	Phe	Ser	Ser	Pro
	50					55					60				
Ser	Val	Lys	Lys	Lys	Pro	Ser	Met	Ile	Leu	Gly	Lys	Ala	Arg	His	Arg
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Leu	Ser	Phe	Ala	Ser	Phe	Ser	Ser	Met	Phe	His	Ala	Phe	Leu	Ser	Asn
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Asn	Arg	Lys	Leu	Tyr	Lys	Lys	Val	Val	Glu	Leu	Ala	Gln	Asp	Lys	Gly
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Ser	Tyr	Phe	Gly	Ser	Leu	Val	Gln	Asp	Tyr	Lys	Val	Tyr	Ser	Leu	Glu
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Met	Met	Ala	Arg	Gln	Thr	Ser	Ser	Thr	Glu	Met	Leu	Gln	Glu	Ile	Arg
	130					135					140				
Thr	Met	Met	Thr	Gln	Leu	Lys	Ser	Tyr	Leu	Leu	Gln	Ser	Thr	Glu	Leu
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Lys	Ala	Leu	Val	Asp	Pro	Ala	Leu	His	Ser	Glu	Glu	Glu	Leu	Glu	Ala
			165						170					175	
Ile	Val	Glu	Ser	Ala	Leu	Tyr	Lys	Cys	Val	Leu	Lys	Pro	Leu	Lys	Glu
		180					185						190		
Ala	Ile	Asn	Ser	Cys	Leu	His	Gln	Ile	His	Ser	Lys	Asp	Gly	Ser	Leu
	195						200					205			
Gln	Gln	Leu	Lys	Glu	Asn	Gln	Leu	Val	Ile	Leu	Ala	Thr	Thr	Thr	Thr
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<212> DNA
<213> Homo sapiens
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<210> 4004

<211> 160  
 <212> PRT  
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<400> 4004

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Leu Ala Leu Lys Phe Thr Cys Ser Arg Ala Lys Asp Val Ile Ile Pro
      35           40           45
Ala Lys Pro Pro Val Ser Phe Phe Ser Leu Arg Ser Pro Val Leu Asp
      50           55           60
Leu Phe Gln Gly Gln Leu Asp Tyr Ala Glu Tyr Val Arg Arg Asp Ser
65           70           75           80
Glu Val Val Leu Leu Phe Phe Tyr Ala Pro Trp Cys Gly Gln Ser Ile
      85           90           95
Ala Ala Arg Ala Glu Ile Glu Gln Ala Ala Ser Arg Leu Ser Asp Gln
      100          105          110
Val Leu Phe Val Ala Ile Asn Cys Trp Trp Asn Gln Gly Lys Cys Arg
      115          120          125
Lys Gln Lys His Phe Phe Tyr Phe Pro Val Ile Tyr Leu Tyr His Arg
      130          135          140
Ser Phe Gly Pro Ile Glu Tyr Lys Gly Pro His Glu Cys Cys Leu His
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 <212> DNA  
 <213> Homo sapiens

<400> 4005

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Met Met Lys Ala Ala Ile Ser Glu Thr Glu Asp Met Pro Met Phe Glu  
35 40 45  
Pro Lys Met Thr Arg Ser Lys Leu Lys Glu Val Val Glu Lys Gly Met  
50 55 60  
Val Ile Pro Thr Trp Asn Ile Ser Pro Ile Lys Lys Ala Asn Glu Ile  
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Lys Pro Pro Gln Phe Val Asp Ile His Leu Glu Glu Asp Asp Ser Ser  
85 90 95  
Asp Glu Glu Tyr Gln Pro Asp Asp Glu Glu Glu Asp Glu Thr Ala Glu  
100 105 110  
Glu Ser Leu Leu Glu Ser Asp Val Glu Ser Thr Ala Ser Ser Pro Arg  
115 120 125  
Gly Ala Lys Lys Ser Arg Leu Arg Gln Ser Ser Glu Met Thr Glu Thr  
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Asp Glu Glu Ser Gly Ile Leu Ser Glu Ala Glu Lys Val Thr Thr Pro  
145 150 155 160  
Ala Ile Arg His Ile Ser Ala Glu Val Val Pro Met Gly Pro Pro Pro  
165 170 175  
Pro Pro Lys Pro Lys Gln Thr Arg Asp Ser Thr Phe Met Glu Lys Leu  
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Phe Gln Pro Met Asp Asp Ser Leu Ile Ala Phe Arg Thr Arg  
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<212> DNA  
<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

<400> 4008

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	50					55					60					
Arg	Lys	His	Lys	Lys	Lys	His	Lys	Glu	Arg	His	Lys	Met	Gly	Glu	Glu	80
				70						75						
Val	Ile	Pro	Leu	Arg	Val	Leu	Ser	Lys	Ser	Glu	Trp	Met	Asp	Leu	Lys	95
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Lys	Glu	Tyr	Leu	Ala	Leu	Gln	Lys	Ala	Ser	Met	Ala	Ser	Leu	Lys	Lys	110
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Glu	Cys	Arg	Thr	Gln	Glu	Lys	Val	Asn	Ala	Thr	Gly	Pro	Gln	Phe	Val	160
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				165						170						
Lys	Gln	Val	Arg	Asp	Thr	Leu	Ala	Ala	Ile	Ser	Glu	Val	Leu	Tyr	Val	190
				180				185								
Asp	Leu	Leu	Glu	Gly	Asp	Thr	Glu	Cys	His	Ala	Arg	Phe	Lys	Thr	Pro	205
		195					200									
Glu	Asp	Ala	Gln	Ala	Val	Ile	Asn	Ala	Tyr	Thr	Glu	Ile	Asn	Lys	Lys	220
						215										
His	Cys	Trp	Lys	Leu	Glu	Ile	Leu	Ser	Gly	Asp	His	Glu	Gln	Arg	Tyr	240
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Trp	Gln	Lys	Ile	Leu	Val	Asp	Arg	Gln	Ala	Lys	Leu	Asn	Gln	Pro	Arg	255
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 Tyr Asp  
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 <212> DNA  
 <213> Homo sapiens

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<210> 4010  
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 <212> PRT  
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          20                      25                      30  
 Met Gln Ala Ser Val Pro Gly Pro Ser Glu Glu Pro Val Val Tyr Asn  
          35                      40                      45  
 Pro Thr Thr Ala Ala Phe Ile Cys Asp Ser Leu Val Asn Glu Lys Thr  
          50                      55                      60  
 Ile Gly Ser Pro Pro Asn Glu Phe Tyr Cys Ser Glu Asn Thr Ser Val  
 65                      70                      75                      80  
 Pro Asn Glu Ser Asn Lys Ile Leu Val Asn Lys Asp Val Pro Gln Lys

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 Pro Gly Gly Glu Thr Thr Pro Ser Val Thr Asp Leu Leu Asn Tyr Phe  
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 115 120 125  
 Cys Ala Ser Leu Gln Asn Ala Glu Lys Thr Met Gln Ile Thr Glu Glu  
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 Pro Glu Tyr Leu Ile Leu Thr Leu Leu Arg Phe Ser Tyr Asp Gln Lys  
 145 150 155 160  
 Tyr His Val Arg Arg Lys Ile Leu Asp Asn Val Ser Leu Pro Leu Val  
 165 170 175  
 Leu Glu Leu Pro Val Lys Arg Ile Thr Ser Phe Ser Ser Leu Ser Glu  
 180 185 190  
 Ser Trp Ser Val Asp Val Asp Phe Thr Asp Leu Ser Glu Asn Leu Ala  
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 <212> DNA  
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<211> 419

<212> PRT

<213> Homo sapiens

<400> 4012

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65				70				75				80			
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		85						90				95			
Lys	Ala	Asn	Gly	Leu	His	Gly	Phe	Met	Asn	Trp	Pro	His	Asn	Leu	Leu
	100							105				110			
Thr	Leu	Cys	Gly	Gly	Val	Ser	Leu	Asp	Ser	Gly	Gly	Phe	Gln	Met	Val
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Ser	Leu	Val	Ser	Leu	Ser	Glu	Val	Thr	Glu	Glu	Gly	Val	Arg	Phe	Arg
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Ser	Pro	Tyr	Asp	Gly	Asn	Glu	Thr	Leu	Leu	Ser	Pro	Glu	Lys	Ser	Val
145				150				155				160			
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		165						170				175			
Val	Val	Ser	Ser	Thr	Val	Thr	Gly	Pro	Arg	Val	Glu	Glu	Ala	Met	Tyr
	180						185					190			
Arg	Ser	Ile	Arg	Trp	Leu	Asp	Arg	Cys	Ile	Ala	Ala	His	Gln	Arg	Pro
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Asp	Lys	Gln	Asn	Leu	Phe	Ala	Ile	Ile	Gln	Gly	Gly	Leu	Asp	Ala	Asp
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<211> 1419
<212> DNA
<213> Homo sapiens
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180
gcccagggtg ccattcctcg aagcacctcc ttcgaccgga agctgcccga tggcacgaga
240
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300
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360
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420
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480
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660

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<211> 473

<212> PRT

<213> Homo sapiens

<400> 4014

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			20					25					30		
Thr	Pro	Ala	Leu	Gln	Pro	Leu	Ser	Arg	Ala	Ser	Pro	Ile	Pro	Gly	Thr
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Pro	Asp	Arg	Leu	Pro	Cys	Gln	Gln	Leu	Leu	Gln	Gln	Ala	Gln	Ala	Ala
	50				55					60					
Ile	Pro	Arg	Ser	Thr	Ser	Phe	Asp	Arg	Lys	Leu	Pro	Asp	Gly	Thr	Arg
65				70						75				80	
Ser	Ser	Pro	Ser	Asn	Gln	Ser	Ser	Ser	Ser	Asp	Pro	Gly	Pro	Gly	Gly
			85					90					95		
Ser	Gly	Pro	Trp	Arg	Pro	Gln	Val	Gly	Tyr	Asp	Gly	Cys	Gln	Ser	Pro
		100					105						110		
Leu	Leu	Leu	Glu	His	Gln	Gly	Ser	Gly	Pro	Leu	Glu	Cys	Asp	Gly	Ala
		115				120						125			
Arg	Glu	Arg	Glu	Asp	Thr	Met	Glu	Ala	Ser	Arg	His	Pro	Glu	Thr	Lys
	130				135					140					
Trp	His	Gly	Pro	Pro	Ser	Lys	Val	Leu	Gly	Ser	Tyr	Lys	Glu	Arg	Ala
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Leu	Gln	Lys	Asp	Gly	Ser	Cys	Lys	Asp	Ser	Pro	Asn	Lys	Leu	Ser	His

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240

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<211> 95

<212> PRT

<213> Homo sapiens

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		20					25					30			
Asn	Arg	Arg	Met	Lys	Trp	Lys	Lys	Ile	Val	Leu	Gln	Gly	Gly	Gly	Leu
		35				40					45				
Glu	Ser	Pro	Thr	Lys	Pro	Lys	Gly	Arg	Pro	Lys	Lys	Asn	Ser	Ile	Pro
		50				55					60				
Thr	Ser	Glu	Gln	Leu	Thr	Glu	Gln	Glu	Arg	Ala	Lys	Asp	Ala	Glu	Lys
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Pro	Ala	Glu	Val	Pro	Gly	Glu	Pro	Ser	Asp	Arg	Ser	Arg	Glu	Asp	
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<210> 4017

<211> 1521

<212> DNA

<213> Homo sapiens

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&lt;210&gt; 4018

&lt;211&gt; 480

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4018

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Val	Ala	Trp	Asp	Tyr	Gly	Arg	Leu	Ala	Leu	Val	Thr	Asp	Ala	Asp	Arg
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Leu	Arg	Arg	Gln	Glu	Arg	Asp	Arg	Val	Glu	Gln	Glu	Tyr	Val	Ala	Ser
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Ala	Met	His	Gly	Asp	Ser	His	Asp	Arg	Tyr	Glu	Arg	Leu	Thr	Phe	Val
			85					90						95	
Ser	Ser	Ser	Val	Asp	Phe	Asp	Gln	Arg	Asp	Asn	Gly	Phe	Cys	Ser	Trp
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Leu	Thr	Ala	Ile	Phe	Arg	Ile	Lys	Asp	Asp	Glu	Ile	Arg	Asp	Lys	Cys
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Gly	Gly	Asp	Ala	Val	His	Tyr	Leu	Ser	Phe	Gln	Arg	His	Ile	Ile	Gly
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Leu	Leu	Val	Val	Val	Gly	Val	Leu	Ser	Val	Gly	Ile	Val	Leu	Pro	Val
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Asn	Phe	Ser	Gly	Asp	Leu	Leu	Glu	Asn	Asn	Ala	Tyr	Ser	Phe	Gly	Arg
			165					170						175	
Thr	Thr	Ile	Ala	Asn	Leu	Lys	Ser	Gly	Asn	Asn	Leu	Leu	Trp	Leu	His
			180					185					190		
Thr	Ser	Phe	Ala	Phe	Leu	Tyr	Leu	Leu	Leu	Thr	Val	Tyr	Ser	Met	Arg
		195					200					205			
Arg	His	Thr	Ser	Lys	Met	Arg	Tyr	Lys	Glu	Asp	Asp	Leu	Val	Lys	Arg
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Cys	Cys	Val	Val	Arg	Gly	Cys	Glu	Gln	Val	Glu	Ala	Ile	Glu	Tyr	Tyr
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Thr	Lys	Leu	Glu	Gln	Lys	Leu	Lys	Glu	Asp	Tyr	Lys	Arg	Glu	Lys	Gly
			325					330						335	
Lys	Val	Asn	Glu	Lys	Pro	Leu	Gly	Met	Ala	Phe	Val	Thr	Phe	His	Asn
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Glu	Thr	Ile	Thr	Ala	Ile	Ile	Leu	Lys	Asp	Phe	Asn	Val	Cys	Lys	Cys
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Gln	Gly	Cys	Thr	Cys	Arg	Gly	Glu	Pro	Arg	Pro	Ser	Ser	Cys	Ser	Glu
	370					375	</								

3196



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&lt;210&gt; 4020

&lt;211&gt; 296

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4020

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 Ser Tyr Val Leu Pro Arg Lys Val Ile Thr Ala Ala Val Ile Gly Ser  
 20 25 30  
 Leu Val Cys Gly Leu Leu Leu Val Ile Ala Leu Gly Cys Thr Cys Lys  
 35 40 45  
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 50 55 60  
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Ser Tyr Asp Arg Leu Arg Val Phe Asn Trp Ile Pro Arg Arg Ser Ile			
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Lys Asn Lys Phe Glu Leu Thr Tyr Val Gly Pro Ser Gln Val Ile Val			
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Phe Met Asn Pro His Leu Ile Ser Val Arg Ile Asn Glu Arg Cys Gln			
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Thr Ile Ala Ile Val Asp Leu Ile Gly Gly Tyr Asn Ile Gly Thr Val			
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Ser His Glu Ser Arg Val Asp Trp Leu Glu Leu Asn Glu Thr Gly His			
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Leu Val Gly Gln Ala Arg Gly Ala Leu Glu Glu Lys Asp Phe Gln Lys						
	1140		1145		1150	
Ala Glu Gly Leu Leu Leu Arg Ala Gln Arg Pro Gly Leu Ala Leu Asn						
	1155		1160		1165	
Tyr Tyr Lys Glu Ala Gly Leu Trp Ser Asp Ala Leu Arg Ile Cys Lys						
	1170		1175		1180	
Asp Tyr Val Pro Ser Gln Leu Glu Ala Leu Gln Glu Glu Tyr Glu Arg						
1185	1190		1195		1200	
Glu Ala Thr Lys Lys Gly Ala Arg Gly Val Glu Gly Phe Val Glu Gln						
	1205		1210		1215	
Ala Arg His Trp Glu Gln Ala Gly Glu Tyr Ser Arg Ala Val Asp Cys						
	1220		1225		1230	
Tyr Leu Lys Val Arg Asp Ser Gly Asn Ser Gly Leu Ala Glu Lys Cys						
	1235		1240		1245	
Trp Met Lys Ala Ala Glu Leu Ser Ile Lys Phe Leu Pro Pro Gln Arg						
	1250		1255		1260	
Asn Met Glu Val Val Leu Ala Val Gly Pro Gln Leu Ile Gly Ile Gly						
1265	1270		1275		1280	
Lys His Ser Ala Ala Ala Glu Leu Tyr Leu Asn Leu Asp Leu Val Lys						
	1285		1290		1295	
Glu Ala Ile Asp Ala Phe Ile Glu Gly Glu Glu Trp Asn Lys Ala Lys						

1300 1305 1310  
 Arg Val Ala Lys Glu Leu Asp Pro Arg Tyr Glu Asp Tyr Val Asp Gln  
 1315 1320 1325  
 His Tyr Lys Glu Phe Leu Lys Asn Gln Gly Lys Val Asp Ser Leu Val  
 1330 1335 1340  
 Gly Val Asp Val Ile Ala Ala Leu Asp Leu Tyr Val Glu Gln Gly Gln  
 1345 1350 1355 1360  
 Trp Asp Lys Cys Ile Glu Thr Ala Thr Lys Gln Asn Tyr Lys Ile Leu  
 1365 1370 1375  
 His Lys Tyr Val Ala Leu Tyr Ala Thr His Leu Ile Arg Glu Gly Ser  
 1380 1385 1390  
 Ser Ala Gln Ala Leu Ala Leu Tyr Val Gln His Gly Ala Pro Ala Asn  
 1395 1400 1405  
 Pro Gln Asn Phe Asn Ile Tyr Lys Arg Ile Phe Thr Asp Met Val Ser  
 1410 1415 1420  
 Ser Pro Gly Thr Asn Cys Ala Glu Ala Tyr His Ser Trp Ala Asp Leu  
 1425 1430 1435 1440  
 Arg Asp Val Leu Phe Asn Leu Ala Val Leu Ser Pro Ser Ser Val  
 1445 1450 1455  
 Lys Thr Trp Lys Ser Ser Glu Ala Asn Ser Pro Ala His Glu Glu Phe  
 1460 1465 1470  
 Lys Thr Met Leu Leu Ile Ala His Tyr Tyr Ala Thr Arg Ser Ala Ala  
 1475 1480 1485  
 Gln Ser Val Lys Gln Leu Glu Thr Val Ala Ala Arg Leu Ser Val Ser  
 1490 1495 1500  
 Leu Leu Arg His Thr Gln Leu Leu Pro Val Asp Lys Ala Phe Tyr Glu  
 1505 1510 1515 1520  
 Ala Gly Ile Ala Ala Lys Ala Val Gly Trp Asp Asn Met Ala Phe Ile  
 1525 1530 1535  
 Phe Leu Asn Arg Phe Leu Asp Leu Thr Asp Ala Ile Glu Glu Gly Thr  
 1540 1545 1550  
 Leu Asp Gly Leu Asp His Ser Asp Phe Gln Asp Thr Asp Ile Pro Phe  
 1555 1560 1565  
 Glu Val Pro Leu Pro Ala Lys Gln His Val Pro Glu Ala Glu Arg Glu  
 1570 1575 1580  
 Glu Val Arg Asp Trp Val Leu Thr Val Ser Met Asp Gln Arg Leu Glu  
 1585 1590 1595 1600  
 Gln Val Leu Pro Arg Asp Glu Arg Gly Ala Tyr Glu Ala Ser Leu Val  
 1605 1610 1615  
 Ala Ala Ser Thr Gly Val Arg Ala Leu Pro Cys Leu Ile Thr Gly Tyr  
 1620 1625 1630  
 Pro Ile Leu Arg Asn Lys Ile Glu Phe Lys Arg Pro Gly Lys Ala Ala  
 1635 1640 1645  
 Asn Lys Asp Asn Trp Asn Lys Phe Leu Met Ala Ile Lys Thr Ser His  
 1650 1655 1660  
 Ser Pro Val Cys Gln Asp Val Leu Lys Phe Ile Ser Gln Trp Cys Gly  
 1665 1670 1675 1680  
 Gly Leu Pro Ser Thr Ser Phe Ser Phe Gln  
 1685 1690

&lt;210&gt; 4025

&lt;211&gt; 908

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4025

ttaagaactc acactggann gaaaccctat gaatgcaatc actgtgggaa agcatttagt  
 60  
 gatccctcat cccttagact gcatttgaga attcacactg gagaaaaacc ctatgaatgt  
 120  
 aaccagtgtt ttcacgtttt ccgcaccagt tgtaacctta aaagccacaa gaggattcac  
 180  
 acgggggaga atcaccatga atgtaatcag tgtggaaaag ctttcagcac aaggctctct  
 240  
 ctactgggc acaattgcat tcatacaggg gagaaacctt atgaatgtaa ggaatgtggg  
 300  
 aaaaccttta tgtataattc atcccttatt caacatctga gaactcatac tggagagaaa  
 360  
 ccctatgaat gtaaggagtg tgggaaagcc tttaggcaac attcacacct tgtcacacac  
 420  
 cagaaaatcc atactggaga gaagccctat cagtgcactg aatgtgggaa agccttcagg  
 480  
 cggegttcac tccttattca acatcggaga attcatagtg gtgagaagcc ctatgaatgt  
 540  
 aaggaatgtg ggaagctctt catttggcgc acagctttcc tcaaacaatca gagcctgcat  
 600  
 gctggagaga aacttgaaga atgtgagaaa nnaccttcag caaggatgag gagcttaggg  
 660  
 gagnagcaga aaattcacca agaagagaaa gcttattggt gtaatcagtg tggtagggct  
 720  
 ttccagggca gctcagacct catcggacat caggtaactc atacaggaga gaaaccatat  
 780  
 gaatgtaaag aatgtggana aactttcaat cagagctcag accttctgag acatcataga  
 840  
 attcacagtg gagaaaaacc ttatgtatgc aacaaatgtg ggaaatcttt taggggcagc  
 900  
 tcagatct  
 908

&lt;210&gt; 4026

&lt;211&gt; 302

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4026

Leu Arg Thr His Thr Gly Xaa Lys Pro Tyr Glu Cys Asn His Cys Gly  
 1 5 10 15  
 Lys Ala Phe Ser Asp Pro Ser Ser Leu Arg Leu His Leu Arg Ile His  
 20 25 30  
 Thr Gly Glu Lys Pro Tyr Glu Cys Asn Gln Cys Phe His Val Phe Arg  
 35 40 45  
 Thr Ser Cys Asn Leu Lys Ser His Lys Arg Ile His Thr Gly Glu Asn  
 50 55 60  
 His His Glu Cys Asn Gln Cys Gly Lys Ala Phe Ser Thr Arg Ser Ser  
 65 70 75 80  
 Leu Thr Gly His Asn Cys Ile His Thr Gly Glu Lys Pro Tyr Glu Cys  
 85 90 95  
 Lys Glu Cys Gly Lys Thr Phe Met Tyr Asn Ser Ser Leu Ile Gln His

```

      100      105      110
Leu Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Lys Glu Cys Gly
      115      120      125
Lys Ala Phe Arg Gln His Ser His Leu Val Thr His Gln Lys Ile His
      130      135      140
Thr Gly Glu Lys Pro Tyr Gln Cys Thr Glu Cys Gly Lys Ala Phe Arg
145      150      155      160
Arg Arg Ser Leu Leu Ile Gln His Arg Arg Ile His Ser Gly Glu Lys
      165      170      175
Pro Tyr Glu Cys Lys Glu Cys Gly Lys Leu Phe Ile Trp Arg Thr Ala
      180      185      190
Phe Leu Lys His Gln Ser Leu His Ala Gly Glu Lys Leu Glu Glu Cys
      195      200      205
Glu Lys Xaa Pro Ser Ala Arg Met Arg Ser Leu Gly Glu Xaa Gln Lys
210      215      220
Ile His Gln Glu Glu Lys Ala Tyr Trp Cys Asn Gln Cys Gly Arg Ala
225      230      235      240
Phe Gln Gly Ser Ser Asp Leu Ile Gly His Gln Val Thr His Thr Gly
      245      250      255
Glu Lys Pro Tyr Glu Cys Lys Glu Cys Gly Xaa Thr Phe Asn Gln Ser
      260      265      270
Ser Asp Leu Leu Arg His His Arg Ile His Ser Gly Glu Lys Pro Tyr
      275      280      285
Val Cys Asn Lys Cys Gly Lys Ser Phe Arg Gly Ser Ser Asp
      290      295      300

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&lt;210&gt; 4027

&lt;211&gt; 941

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4027

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gcgcgccagg gaacctatat ctgtgaaatc cgcctcaaag gggagagcca ggtgttcaag
60
aaggcgggtg tactgcatgt gcttccagag gagcccaaag agctcatggt ccatgtgggt
120
ggattgattc agatgggatg tgttttccag agcacagaag tgaaacacgt gaccaaggta
180
gaatggatat tttcaggacg gcgcgcaaag gaggagattg tatttcgtta ctaccacaaa
240
ctcaggatgt ctgcggagta ctcccagagc tggggccact tccagaatcg tgtgaacctg
300
gtgggggaca ttttccgcaa tgacggttcc atcatgcttc aaggagttag ggagtcagat
360
ggaggaaact acacctgcag tatccacctt gggaacctgg tgttcaagaa aaccattgtg
420
ctgcatgtca gcccggaaga gcctcgaaca ctggtgaccc cggcagccct gaggcctctg
480
gtcttgggtg gtaatcagtt ggtgatcatt gtgggaattg tctgtgccac aatcctgctg
540
ctccctgttc tgatattgat cgtgaagaag acctgtggaa ataagagttc agtgaattct
600
acagtcttgg tgaagaacac gaagaagact aatccagaga tgaaagaaaa accctgccat
660

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tttgaaagat gtgaagggga ggtgaacaca cgcttcagcc taaaacacta agtagatgca  
 720  
 ggccctgggcc gttctcatat ccccggaac catatcttac ccattgtatg tcgcagcttg  
 780  
 caggccagtg cttggcacag agcagggact caggaagcct ttgtcactaa agtaagagcc  
 840  
 tctgcggagt acagtgcatt gggtcggctg ggacaccccc aggcagcaga tcctgggtatt  
 900  
 gggctgagga aagagcactg cgcttgaggat cagtaagatc t  
 941

<210> 4028

<211> 236

<212> PRT

<213> Homo sapiens

<400> 4028

Ala	Arg	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu	Lys	Gly	Glu	Ser
1				5					10					15	
Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val	Leu	Pro	Glu	Glu	Pro
			20					25					30		
Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu	Ile	Gln	Met	Gly	Cys	Val
			35				40					45			
Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val	Thr	Lys	Val	Glu	Trp	Ile	Phe
			50				55				60				
Ser	Gly	Arg	Arg	Ala	Lys	Glu	Glu	Ile	Val	Phe	Arg	Tyr	Tyr	His	Lys
65					70					75				80	
Leu	Arg	Met	Ser	Ala	Glu	Tyr	Ser	Gln	Ser	Trp	Gly	His	Phe	Gln	Asn
				85				90						95	
Arg	Val	Asn	Leu	Val	Gly	Asp	Ile	Phe	Arg	Asn	Asp	Gly	Ser	Ile	Met
			100					105					110		
Leu	Gln	Gly	Val	Arg	Glu	Ser	Asp	Gly	Gly	Asn	Tyr	Thr	Cys	Ser	Ile
			115				120					125			
His	Leu	Gly	Asn	Leu	Val	Phe	Lys	Lys	Thr	Ile	Val	Leu	His	Val	Ser
			130				135				140				
Pro	Glu	Glu	Pro	Arg	Thr	Leu	Val	Thr	Pro	Ala	Ala	Leu	Arg	Pro	Leu
145					150					155				160	
Val	Leu	Gly	Gly	Asn	Gln	Leu	Val	Ile	Ile	Val	Gly	Ile	Val	Cys	Ala
				165				170						175	
Thr	Ile	Leu	Leu	Leu	Pro	Val	Leu	Ile	Leu	Ile	Val	Lys	Lys	Thr	Cys
			180					185					190		
Gly	Asn	Lys	Ser	Ser	Val	Asn	Ser	Thr	Val	Leu	Val	Lys	Asn	Thr	Lys
			195				200					205			
Lys	Thr	Asn	Pro	Glu	Met	Lys	Glu	Lys	Pro	Cys	His	Phe	Glu	Arg	Cys
			210			215					220				
Glu	Gly	Glu	Val	Asn	Thr	Arg	Phe	Ser	Leu	Lys	His				
225					230						235				

<210> 4029

<211> 909

<212> DNA

<213> Homo sapiens

<400> 4029

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 60  
 gtgggagccg ccgcgctccg ggctgccgct gtgggcccag ggcctcacct tcttctactg  
 120  
 ctacatgctg ctgctggtgc tgccgtgcgt ggcgctcagc gaggtcagca tgcagggcga  
 180  
 gcacatagcg ccgcagaaga tgatgctgta cccggtgctc agtctcgcca ccgtcaatgt  
 240  
 ggtggggcgt gctggcgcg cccgccaaca tggcgctgtt ccgggacagc cgtgtctcgg  
 300  
 ccatcttcgt cggcaaaaac gtgggtggcg tcgccaccaa ggctgcacc tnntcctgga  
 360  
 gtaccgcccgc caggtgcgcg acttcccnng ccgcctgcgc tatcactgga gctgcagccg  
 420  
 ccacccccgc agcgcaactc ggtgccgccg ccgcgcgcgc cgctgcacgg ccgcctggg  
 480  
 ncgccccac atgtcctcgc ccacgcgtga cccctggac acgtgacagg gcccgcgcg  
 540  
 ccccgacac gccctgggg cgagagaca ccgggttggc ttggggcgcg cggtttgc  
 600  
 gggatggggt gggggcgggc tcccctaggg acaggtgcct cgagtgcgcg tgcctggggt  
 660  
 cccgcggccg cttcttcac tcaggaatct ctcggaccgc ggatcctcag ccccgctcc  
 720  
 accagcccgc ccagcgcgt ggggtctgtt gggaggcctg ggccggagca gagcagaggt  
 780  
 gatccggccc ctgcctgctg ggccgcccgg gttggaaggg agggcagtgt gggcggagat  
 840  
 ctgctccttc ggtggggggc tctggctcag atttggggcc aaggaggcct ctgtcatttt  
 900  
 aaagactcg  
 909

&lt;210&gt; 4030

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4030

Arg	Pro	Pro	Val	Leu	Gly	Gly	Ala	Gly	Pro	Ala	Gly	Pro	Ala	Gly	His
1				5					10					15	
Ala	Gly	Gln	Pro	Val	Gly	Ala	Ala	Ala	Leu	Arg	Ala	Ala	Ala	Val	Gly
			20						25					30	
Arg	Gly	Pro	His	Leu	Leu	Leu	Leu	Leu	His	Ala	Ala	Ala	Gly	Ala	Ala
			35					40					45		
Val	Arg	Gly	Ala	Gln	Arg	Gly	Gln	His	Ala	Gly	Arg	Ala	His	Ser	Ala
			50					55				60			
Ala	Glu	Asp	Asp	Ala	Val	Pro	Gly	Ala	Gln	Ser	Arg	His	Arg	Gln	Cys
65					70					75				80	
Gly	Gly	Pro	Cys	Trp	Arg	Ala	Pro	Pro	Thr	Trp	Arg	Cys	Ser	Gly	Thr
				85					90					95	
Ala	Val	Ser	Arg	Pro	Ser	Ser	Ser	Ala	Lys	Thr	Trp	Trp	Arg	Ser	Pro
				100				105						110	
Pro	Arg	Pro	Ala	Pro	Xaa	Pro	Gly	Val	Pro	Pro	Pro	Gly	Ala	Arg	Leu

	115		120		125	
Pro	Xaa	Pro	Pro	Ala	Leu	Ser
	130		135		140	
Arg	Asn	Ser	Val	Pro	Pro	Pro
145			150		155	
Xaa	Pro	Pro	His	Val	Leu	Ala
			165			

&lt;210&gt; 4031

&lt;211&gt; 1406

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4031

```

naagctgaga acgcatcttt agctaaactt cgcattgaac gagaaagtgc cttggaaaaa
60
ctcaggaaag aaattgcagg cttcgaacaa cagaaagcaa aagaattagc tcgaatagaa
120
gagtttaaaa aggaggagat gaggaagcta caaaaggaac gtaaagtttt tgaaaagtat
180
actacagctg caagaacttt tccagataaa aaggaacgtg aagaaatata gactttaaaa
240
cagcaaatag cagattttacg ggaagatttg aaaagaaagg agaccaaata gtcaagtaca
300
cacagccgtc tcagaagcca gatacaaatg ttagtcagag agaacacaga cctccgggaa
360
gaaataaaaag tgatggaaaag attccgactg gatgcctgga agagagcaga agccatagag
420
agcagcctcg aggtggagaa gaaggacaag cttgcgaaca catctgttcg atttcaaaac
480
agtcagattt cttcaggaac ccaggtagaa aaatacaaga aaaattatct tccaatgcaa
540
ggcaatccac ctcgaagatc caagtctgca cctcctcgtg atttaggcaa ttgggataag
600
ggacaggctg cctctcccag ggagccactt gaaccactga acttcccaga tcctgaatat
660
aaagaggagg aggaagacca agacatacag ggagaaatca gtcacctga tggaaagggtg
720
gaaaaggttt ataagaatgg gtgccgtgtt atactgtttc ccaatggaac tcgaaaggaa
780
gtgagtgcag atgggaagac catcactgtc actttcttta atggtgacgt gaagcagggtc
840
atgccagacc aaagagtgat ctactactat gcagctgccc agaccactca cacgacatac
900
ccggaggggac tggaagtctt acattttctca agtggacaaa tagaaaaaca ttaccagat
960
ggaagaaaag aaatcacgtt tcctgaccag actgttaaaa acttatttcc tgatggacaa
1020
gaagaaagca ttttcccaga tggtaacaatt gtcagagtac aacgtgatgg caacaaactc
1080
atagagttta ataatggcca aagagaacta catactgccc agttcaagag acgggaatac
1140
ccagatggca ctgttaaaac cgtatatgca aacggtcatc aagaaacgaa gtacagatcc
1200

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ggtcggataa gagttaagga caaggagggt aatgtgctaa tggacacgga gctgtgacga  
 1260  
 tcctcatgtg atcatgaagt aacagtaact gactttttat gttaaaaaat gtacatttac  
 1320  
 tgtggattct gtttaattta ttgtgtatgt gtggggaaaa gattggattc taaaataaaa  
 1380  
 gtttaccctg tggcaaaaaa aaaaaa  
 1406

<210> 4032

<211> 418

<212> PRT

<213> Homo sapiens

<400> 4032

Xaa	Ala	Glu	Asn	Ala	Ser	Leu	Ala	Lys	Leu	Arg	Ile	Glu	Arg	Glu	Ser
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Ala	Leu	Glu	Lys	Leu	Arg	Lys	Glu	Ile	Ala	Gly	Phe	Glu	Gln	Gln	Lys
			20					25					30		
Ala	Lys	Glu	Leu	Ala	Arg	Ile	Glu	Phe	Lys	Lys	Glu	Glu	Met	Arg	
		35					40					45			
Lys	Leu	Gln	Lys	Glu	Arg	Lys	Val	Phe	Glu	Lys	Tyr	Thr	Thr	Ala	Ala
	50					55					60				
Arg	Thr	Phe	Pro	Asp	Lys	Lys	Glu	Arg	Glu	Glu	Ile	Gln	Thr	Leu	Lys
65					70					75				80	
Gln	Gln	Ile	Ala	Asp	Leu	Arg	Glu	Asp	Leu	Lys	Arg	Lys	Glu	Thr	Lys
			85						90				95		
Trp	Ser	Ser	Thr	His	Ser	Arg	Leu	Arg	Ser	Gln	Ile	Gln	Met	Leu	Val
			100					105					110		
Arg	Glu	Asn	Thr	Asp	Leu	Arg	Glu	Ile	Lys	Val	Met	Glu	Arg	Phe	
		115					120				125				
Arg	Leu	Asp	Ala	Trp	Lys	Arg	Ala	Glu	Ala	Ile	Glu	Ser	Ser	Leu	Glu
	130					135					140				
Val	Glu	Lys	Lys	Asp	Lys	Leu	Ala	Asn	Thr	Ser	Val	Arg	Phe	Gln	Asn
145					150					155				160	
Ser	Gln	Ile	Ser	Ser	Gly	Thr	Gln	Val	Glu	Lys	Tyr	Lys	Lys	Asn	Tyr
			165						170					175	
Leu	Pro	Met	Gln	Gly	Asn	Pro	Pro	Arg	Arg	Ser	Lys	Ser	Ala	Pro	Pro
		180						185					190		
Arg	Asp	Leu	Gly	Asn	Leu	Asp	Lys	Gly	Gln	Ala	Ala	Ser	Pro	Arg	Glu
	195						200					205			
Pro	Leu	Glu	Pro	Leu	Asn	Phe	Pro	Asp	Pro	Glu	Tyr	Lys	Glu	Glu	Glu
	210					215					220				
Glu	Asp	Gln	Asp	Ile	Gln	Gly	Glu	Ile	Ser	His	Pro	Asp	Gly	Lys	Val
225					230					235				240	
Glu	Lys	Val	Tyr	Lys	Asn	Gly	Cys	Arg	Val	Ile	Leu	Phe	Pro	Asn	Gly
			245						250					255	
Thr	Arg	Lys	Glu	Val	Ser	Ala	Asp	Gly	Lys	Thr	Ile	Thr	Val	Thr	Phe
		260						265					270		
Phe	Asn	Gly	Asp	Val	Lys	Gln	Val	Met	Pro	Asp	Gln	Arg	Val	Ile	Tyr
	275						280					285			
Tyr	Tyr	Ala	Ala	Ala	Gln	Thr	Thr	His	Thr	Thr	Tyr	Pro	Glu	Gly	Leu
	290					295					300				
Glu	Val	Leu	His	Phe	Ser	Ser	Gly	Gln	Ile	Glu	Lys	His	Tyr	Pro	Asp

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305          310          315          320
Gly Arg Lys Glu Ile Thr Phe Pro Asp Gln Thr Val Lys Asn Leu Phe
          325          330          335
Pro Asp Gly Gln Glu Glu Ser Ile Phe Pro Asp Gly Thr Ile Val Arg
          340          345          350
Val Gln Arg Asp Gly Asn Lys Leu Ile Glu Phe Asn Asn Gly Gln Arg
          355          360          365
Glu Leu His Thr Ala Gln Phe Lys Arg Arg Glu Tyr Pro Asp Gly Thr
          370          375          380
Val Lys Thr Val Tyr Ala Asn Gly His Gln Glu Thr Lys Tyr Arg Ser
385          390          395          400
Gly Arg Ile Arg Val Lys Asp Lys Glu Gly Asn Val Leu Met Asp Thr
          405          410          415
Glu Leu

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```

<210> 4033
<211> 487
<212> DNA
<213> Homo sapiens

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<400> 4033
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120
tcaagaagag cctcctagt ttggcctcta actggctgtg cgaccccagg caggtcactt
180
gtcctctctg ggaagcagct gaataatgaa cactgggatt ttcccaggct ggcttctcac
240
tgcagagcag aggaaaagca ttctgggggc ctgctatgga gggtcattta tccagtttac
300
aacttccacg gccggccctc aatggcttcc tttctctccc acaagagcgc tgggccaagc
360
cagctctgca ccagttggac gccttccaag aaaaactcag gctccggggg ctgcttgta
420
ggaccagacg ggaggcctgg cgccccgcc cgccatgtgt ggggagcggg cctctccaag
480
ccagtcc
487

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<210> 4034
<211> 94
<212> PRT
<213> Homo sapiens

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<400> 4034
Met Asn Thr Gly Ile Phe Pro Gly Trp Leu Leu Thr Ala Glu Gln Arg
1          5          10          15
Lys Ser Ile Leu Gly Ala Cys Tyr Gly Gly Ser Phe Ile Gln Phe Thr
          20          25          30
Thr Ser Thr Ala Gly Pro Gln Trp Leu Pro Phe Ser Pro Thr Arg Ala
          35          40          45
Leu Gly Gln Ala Ser Ser Ala Pro Val Gly Arg Leu Pro Arg Lys Thr

```

```

      50              55              60
Gln Ala Pro Gly Ala Ala Cys Gln Asp Gln Thr Gly Gly Leu Ala Pro
65              70              75              80
Pro Pro Ala Met Cys Gly Glu Arg Ala Ser Pro Ser Gln Ser
      85              90

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<210> 4035  
 <211> 343  
 <212> DNA  
 <213> Homo sapiens

<400> 4035  
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 aatgttcttg aatcctatgt gagggacaaa cattcagacc ccagcagcaa tgttctggaa  
 120  
 tcctatggga gggacaaact ctcagaaaat agcaagagta ttttgaatc ctatctgagg  
 180  
 tataaacact cagaacctca tagcagtgtt caggaatcct atgtgaggga caaacattca  
 240  
 gaccacagca ggagcattct agaatcctat ttgaggaaca aacattcaga caatcgtagc  
 300  
 agtgttcttg aatccttttt ttttttgaag ctttcaatct ctt  
 343

<210> 4036  
 <211> 114  
 <212> PRT  
 <213> Homo sapiens

<400> 4036  
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 20 25 30  
 Asp Pro Ser Ser Asn Val Leu Glu Ser Tyr Gly Arg Asp Lys Leu Ser  
 35 40 45  
 Glu Asn Ser Lys Ser Ile Leu Glu Ser Tyr Leu Arg Tyr Lys His Ser  
 50 55 60  
 Glu Pro His Ser Ser Val Gln Glu Ser Tyr Val Arg Asp Lys His Ser  
 65 70 75 80  
 Asp His Ser Arg Ser Ile Leu Glu Ser Tyr Leu Arg Asn Lys His Ser  
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 Asp Asn Arg Ser Ser Val Leu Glu Ser Phe Phe Phe Leu Lys Leu Ser  
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 Ile Ser

<210> 4037  
 <211> 741  
 <212> DNA  
 <213> Homo sapiens

<400> 4037

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 120  
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 180  
 tacgtggacc tgtagccagg tgggcataga taaaaggaaa tattgtttgc cagtccctgc  
 240  
 tggaatgatg cctttacaca tctgtctgat ctgattgctc cactgttttc tgacttctct  
 300  
 tccctttcca gggttctagc ctgttcatct agcccatga tggctgtgga catcgagtac  
 360  
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 420  
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 480  
 atgggtggccc cggtgttcca ggagaagaag gtgaaaaagc ggggtgtcctt cgcagacaac  
 540  
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 600  
 ccattcaaca tcaccgagct cctagacaac attgtgagct tgacgacagc agagagcgag  
 660  
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 741

&lt;210&gt; 4038

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4038

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Arg	Gln	Glu	Arg	Phe	Ala	Phe	Lys	Ile	Ser	Pro	Lys	Pro	Ser	Lys	Pro
			20					25					30		
Leu	Arg	Pro	Cys	Ile	Gln	Leu	Ser	Lys	Asn	Glu	Ala	Ser	Gly	Met	
		35				40					45				
Val	Ala	Pro	Ala	Val	Gln	Glu	Lys	Lys	Val	Lys	Lys	Arg	Val	Ser	Phe
	50				55					60					
Ala	Asp	Asn	Gln	Gly	Leu	Ala	Leu	Thr	Met	Val	Lys	Val	Phe	Ser	Glu
65					70				75					80	
Phe	Asp	Asp	Pro	Leu	Asp	Met	Pro	Phe	Asn	Ile	Thr	Glu	Leu	Leu	Asp
				85				90					95		
Asn	Ile	Val	Ser	Leu	Thr	Thr	Ala	Glu	Ser	Glu	Ser	Phe	Val	Leu	Asp
			100				105					110			
Phe	Ser	Gln	Pro	Ser	Ala	Asp	Tyr	Leu	Asp	Phe	Arg	Asn	Arg	Leu	Gln
		115				120					125				
Ala	Asp	His	Val	Cys	Leu										
					130										

&lt;210&gt; 4039

&lt;211&gt; 1503

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4039

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120  
gagcgaggag ccctcgcacg cgctagtctg cgagtgcgag ctcagcccgg cacctgttcc  
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240  
tgcgatgaat ccggccctag gcaaccagac ggacgtggcg ggccttcctg gccaacagca  
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420  
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480  
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cccacgcctg ccacttttgc tagcccggtc gtgccccca ctatcagaga ctgggcaag  
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720  
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780  
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840  
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900  
aagctctggg ggcaggtgga gagggcgggc aggggagaga cccagcggca ctgatcgct  
960  
tgtgaccgga agagtgcct gttaaaagcc acgcagcaga ctcatggggt ctcacaaatc  
1020  
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1080  
gataaatacc tttgattgta acgtgccgtt ttaagaggtt ttgtgtttgt ttgcttgaat  
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1200  
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1260  
gagttgtttc ttttagtgca tttccactg ggtcttttgg gaggcgtcta gcgttcctgc  
1320  
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1380  
caaaagtgtc cttgacatcc gtgacaccgt tttgactttt tgtttttttc ttatttaaca  
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1500



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1503

<210> 4040  
<211> 100  
<212> PRT  
<213> Homo sapiens

<400> 4040  
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Thr Ala Gln Gly Leu Ser Lys Ala Glu Arg Gly Ala Leu Ala Arg Ala  
20 25 30  
Ser Leu Arg Val Ser Ala Gln Pro Gly Thr Cys Ser Ser Ser Ala Ala  
35 40 45  
Ala Phe Pro Pro Leu Gly Pro Ala Pro Leu Ala Ala Pro Ala Arg Ser  
50 55 60  
Cys Asp Glu Ser Gly Pro Arg Gln Pro Asp Gly Arg Gly Gly Pro Ser  
65 70 75 80  
Trp Pro Thr Ala Ala Arg Arg Trp Ser Glu Pro Cys Ala Ala Ala Pro  
85 90 95  
Arg Arg Pro Trp  
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<210> 4041  
<211> 573  
<212> DNA  
<213> Homo sapiens

<400> 4041  
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120  
tgtgttgcca attcagatga acagcttggt gagatgtttc tggaagaaaa aatcccctcg  
180  
atttctgatt taaagctagc aattcgaaga gctactctga aaagatcatt tactcctgta  
240  
tttttgggaa gcgccttgaa gaacaaagga gtccagcctc ttttagatgc tgttttagaa  
300  
tacctcccaa atccatctga agtccagaac tatgctattc tcaataaaga ggatgactca  
360  
aaagagaaaa ccaaaatcct aatgaactcc agtagagaca attcccaccc atttgtaggc  
420  
ctggctttta aactggaggt aggtcgattt ggacaattaa cttatgttcg cagttatcag  
480  
ggagagctaa agaagggtga caccatctat aacacaagga caagaaagaa agtacggttg  
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573

<210> 4042  
<211> 191  
<212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4042

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 20           25           30
Asp His Arg Gln Glu Leu Ile Glu Cys Val Ala Asn Ser Asp Glu Gln
 35           40           45
Leu Gly Glu Met Phe Leu Glu Lys Ile Pro Ser Ile Ser Asp Leu
 50           55           60
Lys Leu Ala Ile Arg Arg Ala Thr Leu Lys Arg Ser Phe Thr Pro Val
 65           70           75           80
Phe Leu Gly Ser Ala Leu Lys Asn Lys Gly Val Gln Pro Leu Leu Asp
 85           90           95
Ala Val Leu Glu Tyr Leu Pro Asn Pro Ser Glu Val Gln Asn Tyr Ala
100           105           110
Ile Leu Asn Lys Glu Asp Asp Ser Lys Glu Lys Thr Lys Ile Leu Met
115           120           125
Asn Ser Ser Arg Asp Asn Ser His Pro Phe Val Gly Leu Ala Phe Lys
130           135           140
Leu Glu Val Gly Arg Phe Gly Gln Leu Thr Tyr Val Arg Ser Tyr Gln
145           150           155           160
Gly Glu Leu Lys Lys Gly Asp Thr Ile Tyr Asn Thr Arg Thr Arg Lys
165           170           175
Lys Val Arg Leu Gln Arg Leu Ala Arg Met His Ala Asp Met Met
180           185           190

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&lt;210&gt; 4043

&lt;211&gt; 744

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4043

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120
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180
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240
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300
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420
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480
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540
ttcactgatt tactcaggct ggctgagaaa aagcagtttg aaccagtgga aatcaaggta
600

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 744

<210> 4044

<211> 219

<212> PRT

<213> Homo sapiens

<400> 4044

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		20					25					30			
Arg	Lys	Glu	Glu	Leu	Arg	Arg	Lys	Ala	Leu	Glu	Glu	Lys	Arg	Arg	
	35				40					45					
Lys	Glu	Glu	Leu	Val	Lys	Lys	Arg	Ile	Glu	Leu	Lys	His	Asp	Lys	Lys
	50				55				60						
Ala	Arg	Ala	Met	Ala	Lys	Arg	Thr	Lys	Asp	Asn	Phe	His	Gly	Tyr	Asn
65				70				75						80	
Gly	Ile	Pro	Ile	Glu	Glu	Lys	Ser	Lys	Lys	Arg	Gln	Ala	Thr	Glu	Ser
			85					90					95		
His	Thr	Ser	Gln	Gly	Thr	Asp	Arg	Glu	Tyr	Glu	Met	Glu	Glu	Glu	Asn
		100					105					110			
Glu	Phe	Leu	Glu	Tyr	Asn	His	Ala	Glu	Ser	Glu	Gln	Glu	Tyr	Glu	Glu
	115					120					125				
Glu	Gln	Glu	Pro	Pro	Lys	Val	Glu	Ser	Lys	Pro	Lys	Val	Ser	Leu	Lys
	130				135					140					
Gly	Ala	Pro	Pro	Pro	Met	Asn	Phe	Thr	Asp	Leu	Leu	Arg	Leu	Ala	Glu
145				150				155						160	
Lys	Lys	Gln	Phe	Glu	Pro	Val	Glu	Ile	Lys	Val	Val	Lys	Lys	Ser	Glu
		165					170					175			
Glu	Arg	Pro	Met	Thr	Ala	Glu	Glu	Leu	Arg	Glu	Arg	Glu	Phe	Leu	Glu
		180					185					190			
Arg	Lys	His	Arg	Arg	Lys	Lys	Leu	Glu	Thr	Asp	Gly	Lys	Leu	Pro	Pro
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Thr	Val	Ser	Lys	Lys	Ala	Pro	Leu	Gly	Arg	Lys					
	210					215									

<210> 4045

<211> 2217

<212> DNA

<213> Homo sapiens

<400> 4045

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 aattgaaaaa aacttagaat tttaaagctg agaaagagtt atcgctgtga tgattttgtg  
 180

gttaatgaca ccaagctggg actggtacag aaagtcagag aacacttaca gaacttggaa  
240  
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300  
aacagcaagt tattaagaat aaatggaagc accactgcc tttgtgccac aggccttcgg  
360  
aatttgggga acacatgttt catgaatgcc atccttcagt cactcagtaa cattgagcag  
420  
ttttgctgtt atttcaaaga actgcccgcc gtggagttaa ggaatgggaa aacagcagga  
480  
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720  
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1680  
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1800

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<210> 4046

<211> 437

<212> PRT

<213> Homo sapiens

<400> 4046

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			20					25					30		
His	Leu	Gln	Asn	Leu	Glu	Asn	Ser	Ala	Phe	Thr	Ala	Asp	Arg	His	Lys
		35				40						45			
Lys	Arg	Lys	Leu	Leu	Glu	Asn	Ser	Thr	Leu	Asn	Ser	Lys	Leu	Leu	Lys
	50					55					60				
Val	Asn	Gly	Ser	Thr	Thr	Ala	Ile	Cys	Ala	Thr	Gly	Leu	Arg	Asn	Leu
65					70					75				80	
Gly	Asn	Thr	Cys	Phe	Met	Asn	Ala	Ile	Leu	Gln	Ser	Leu	Ser	Asn	Ile
				85					90					95	
Glu	Gln	Phe	Cys	Cys	Tyr	Phe	Lys	Glu	Leu	Pro	Ala	Val	Glu	Leu	Arg
			100					105					110		
Asn	Gly	Lys	Thr	Ala	Gly	Arg	Arg	Thr	Tyr	His	Thr	Arg	Ser	Gln	Gly
		115				120						125			
Asp	Asn	Asn	Val	Ser	Leu	Val	Glu	Glu	Phe	Arg	Lys	Thr	Leu	Cys	Ala
	130					135					140				
Leu	Trp	Gln	Gly	Ser	Gln	Thr	Ala	Phe	Ser	Pro	Glu	Ser	Leu	Phe	Tyr
145					150					155				160	
Val	Val	Trp	Lys	Ile	Met	Pro	Asn	Phe	Arg	Gly	Tyr	Gln	Gln	Gln	Asp
				165					170					175	
Ala	His	Glu	Phe	Xaa	Ala	Leu	Pro	Phe	Gly	Pro	Pro	Thr	Leu	Gly	Xaa
			180					185					190		
Phe	Arg	Ala	Val	Ser	Thr	Val	Phe	Pro	Ala	Gln	Gln	Phe	Cys	Arg	Arg
		195					200					205			
Ile	Leu	Leu	Cys	Leu	Gln	Val	Xaa	Lys	Cys	Cys	Ile	Asn	Gly	Ala	Ser
	210					215						220			
Thr	Val	Val	Thr	Ala	Ile	Phe	Gly	Gly	Ile	Leu	Gln	Asn	Glu	Val	Asn
225					230					235				240	
Cys	Leu	Ile	Cys	Gly	Thr	Glu	Ser	Arg	Lys	Phe	Asp	Pro	Phe	Leu	Asp
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Leu	Ser	Leu	Asp	Ile	Pro	Ser	Gln	Phe	Arg	Ser	Lys	Arg	Ser	Lys	Asn

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<210> 4047
<211> 809
<212> DNA
<213> Homo sapiens
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cctaaaagca ttcattgccc cagtagttct taattgtctt ggaaatcatt ctcttgcaaa
180
cttcacattt ccatatcata ctttacttta cgctattact tcatgggctc ctgggcattt
240
ggtctgtttg tgtttctcct ttcctctttg aacaaagtca ggaaaaatgt gtcagtagga
300
gaaaggagga gctgaaggga gtaaataatt caagatcact tctgtcattt gtagtggctg
360
agggctagaa agatattctt cgggtgaagaa actcccaaca ggttccatca gactgataca
420
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480
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720

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 809

<210> 4048  
 <211> 118  
 <212> PRT  
 <213> Homo sapiens

<400> 4048  
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 Val Ala Ile Gly Phe Thr Gly Gly Leu Val Phe Met Tyr Val Gln Cys  
 35 40 45  
 Lys Val Tyr Val Gln Leu Trp Arg Arg Leu Lys Ala Tyr Asn Arg Val  
 50 55 60  
 Ile Phe Val Gln Asn Cys Pro Asp Thr Ala Lys Lys Leu Glu Lys Asn  
 65 70 75 80  
 Phe Ser Cys Asn Val Asn Thr Asp Ile Lys Asp Ala Val Val Val Pro  
 85 90 95  
 Val Pro Gln Thr Gly Ala Asn Ser Leu Pro Ser Ala Glu Gly Gly Pro  
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 Pro Glu Val Val Ser Val  
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<210> 4049  
 <211> 1211  
 <212> DNA  
 <213> Homo sapiens

<400> 4049  
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&lt;211&gt; 403

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4050

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4051

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&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4052

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<211> 2434

<212> PRT

<213> Homo sapiens

<400> 4056

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Cys	Phe	Ala	Ser	Leu	Ala	Asp	Arg	Phe	Thr	Arg	Arg	Gly	Val	Asp	Pro	35	40	45	
Ala	Pro	Leu	Ala	Lys	His	Gly	Leu	Thr	Glu	Glu	Leu	Leu	Ser	Arg	Met	50	55	60	
Ala	Ala	Ala	Gly	Gly	Thr	Val	Ser	Gly	Pro	Ser	Ser	Ala	Cys	Lys	Pro	65	70	75	80
Gly	Arg	Ser	Thr	Thr	Gly	Ala	Pro	Ser	Thr	Thr	Ala	Asp	Ser	Lys	Leu	85	90	95	
Ser	Asn	Gln	Val	Ser	Thr	Ile	Val	Ser	Leu	Leu	Ser	Thr	Leu	Cys	Arg	100	105	110	
Gly	Ser	Pro	Val	Val	Thr	His	Asp	Leu	Leu	Arg	Ser	Glu	Leu	Pro	Asp	115	120	125	
Ser	Ile	Glu	Ser	Ala	Leu	Gln	Gly	Asp	Glu	Arg	Cys	Val	Leu	Asp	Thr	130	135	140	
Met	Arg	Leu	Val	Asp	Leu	Leu	Leu	Val	Leu	Leu	Phe	Glu	Gly	Arg	Lys	145	150	155	160
Ala	Leu	Pro	Lys	Ser	Ser	Ala	Gly	Ser	Thr	Gly	Arg	Ile	Pro	Gly	Leu	165	170	175	
Arg	Arg	Leu	Asp	Ser	Ser	Gly	Glu	Arg	Ser	His	Arg	Gln	Leu	Ile	Asp	180	185	190	
Cys	Ile	Arg	Ser	Lys	Asp	Thr	Asp	Ala	Leu	Ile	Asp	Ala	Ile	Asp	Thr	195	200	205	
Gly	Ala	Phe	Glu	Val	Asn	Phe	Met	Asp	Asp	Val	Gly	Gln	Thr	Leu	Leu	210	215	220	
Asn	Trp	Ala	Ser	Ala	Phe	Gly	Thr	Gln	Glu	Met	Val	Glu	Phe	Leu	Cys	225	230	235	240
Glu	Arg	Gly	Ala	Asp	Val	Asn	Arg	Gly	Gln	Arg	Ser	Ser	Ser	Leu	His	245	250	255	
Tyr	Ala	Ala	Cys	Phe	Gly	Arg	Pro	Gln	Val	Ala	Lys	Thr	Leu	Leu	Arg	260	265	270	
His	Gly	Ala	Asn	Pro	Asp	Leu	Arg	Asp	Glu	Asp	Gly	Lys	Thr	Pro	Leu	275	280	285	
Asp	Lys	Ala	Arg	Glu	Arg	Gly	His	Ser	Glu	Val	Val	Ala	Ile	Leu	Gln	290	295	300	
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Lys Glu Val Cys Asp Ser Asp Val Gly His Asn Leu Pro Thr Ile Leu
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Val Glu Ile Thr Ala Thr Val Leu Asp Gln Glu Asp Asp Asp Asp Gly
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His Leu Leu Ala Leu Gln Ile Ile Arg Asp Leu Val Asp Lys Gly Gly
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Asp Ile Phe Leu Asp Gln Leu Ala Arg Leu Gly Val Ile Ser Lys Val
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Ser Thr Leu Ala Gly Pro Ser Ser Asp Asp Glu Asn Glu Glu Glu Ser
          450          455          460
Lys Pro Glu Lys Glu Asp Glu Pro Gln Glu Asp Ala Lys Glu Leu Gln
465          470          475          480
Gln Gly Lys Pro Tyr His Trp Arg Asp Trp Ser Ile Ile Arg Gly Arg
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Asp Cys Leu Tyr Ile Trp Ser Asp Ala Ala Ala Leu Glu Leu Ser Asn
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Gly Ser Asn Gly Trp Phe Arg Phe Ile Leu Asp Gly Lys Leu Ala Thr
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Met Tyr Ser Ser Gly Ser Pro Glu Gly Gly Ser Asp Ser Ser Glu Ser
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Pro Ser Thr Ser Ser Gln Pro Ile Leu Ser Ala Pro Gly Pro Thr Lys
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Leu Pro Gly Phe Val Phe Glu Ser Asn Arg Gly Thr Lys His Ser Phe
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Thr Ala Glu Thr Ser Leu Gly Ser Glu Phe Val Thr Gly Trp Thr Gly
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Lys Arg Gly Arg Lys Leu Lys Ser Lys Leu Glu Lys Thr Lys Xaa Lys
          645          650          655
Val Arg Thr Met Ala Arg Asp Leu Tyr Asp Asp His Phe Lys Ala Val
          660          665          670
Glu Ser Met Pro Arg Gly Val Val Val Thr Leu Arg Asn Ile Ala Thr
          675          680          685
Gln Leu Glu Ser Ser Trp Glu Leu His Thr Asn Arg Gln Cys Ile Glu
          690          695          700
Ser Glu Asn Thr Trp Arg Asp Leu Met Lys Thr Ala Leu Glu Asn Leu
705          710          715          720
Ile Val Leu Leu Lys Asp Glu Asn Thr Ile Ser Pro Tyr Glu Met Cys
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Ser Ser Gly Leu Val Gln Ala Leu Leu Thr Val Leu Asn Asn Ser Met

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Val	Phe	Lys	Thr	Ala	Phe	Ser	Glu	Asn	Glu	Asp	Asp	Glu	Ser	Arg	Pro
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Gln	Ile	Leu	Thr	Arg	Arg	Leu	Arg	Phe	Arg	Leu	Glu	Arg	Ala	Pro	Gly
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Lys	His	Glu	Arg	Val	Lys	Val	Pro	Arg	Gly	Glu	Ser	Leu	Met	Glu	Trp			
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Ala	Glu	Asn	Val	Met	Gln	Ile	His	Ala	Asp	Arg	Lys	Ser	Val	Leu				

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Ile Thr Lys Leu Phe His	Phe Leu Gly Ile Phe	Leu Ala Lys Cys Ile
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Gln Asp Asn Arg Leu Val	Asp Leu Pro Ile Ser	Lys Pro Phe Phe Lys
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Ala Ser Thr Glu Glu Gly	His Asp Ser Leu Ser	Val Gly Ser Phe Glu
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Glu Asp Ser Lys Ser Glu	Phe Ile Leu Asp Pro	Pro Lys Pro Lys Pro
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Pro Ala Trp Leu Asn Gly	Ile Leu Thr Trp Glu	Asp Phe Glu Leu Val
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Asn Pro His Arg Ala Arg	Phe Leu Lys Glu Ile	Lys Asp Leu Ala Ile
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Lys Arg Arg Gln Ile Leu	Ser Asn Lys Gly Leu	Ser Glu Asp Glu Lys
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Asn Thr Lys Leu Gln Glu	Leu Val Leu Lys Asn	Pro Ser Gly Ser Gly
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Pro Pro Leu Ser Ile Glu	Asp Leu Gly Leu Asn	Phe Gln Phe Cys Pro
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Phe Arg Asp Gly Phe Asn	Lys Val Phe Pro Met	Glu Lys Leu Ser Ser
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Phe Ser His Glu Glu Val	Gln Met Ile Leu Cys	Gly Asn Gln Ser Pro
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Ser Trp Ala Ala Glu Asp	Ile Ile Asn Tyr Thr	Glu Pro Lys Leu Gly
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Tyr Thr Arg Asp Ser Pro	Gly Phe Leu Arg Phe	Val Arg Val Leu Cys
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Cys Ser Thr Leu Pro Pro	Gly Gly Leu Ala Asn	Leu His Pro Arg Leu
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Thr Val Val Arg Lys Val	Asp Ala Thr Asp Ala	Ser Tyr Pro Ser Val
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Asn Thr Cys Val His Tyr	Leu Lys Leu Pro Glu	Tyr Ser Ser Glu Glu
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&lt;211&gt; 533

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4057

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4058

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Phe	Ser	Asn	Ile	Ser	Ser	Ile	Tyr	Gln	Phe	His	Ser	Gln	Phe	Phe	Leu
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Pro	Glu	Leu	Gln	Arg	Arg	Leu	Asp	Asp	Trp	Thr	Ala	Asn	Pro	Arg	Ile
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Gly	Asp	Val	Ile	Gln	Lys	Leu	Ala	Pro	Phe	Leu	Lys	Met	Tyr	Ser	Glu
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Tyr	Val	Lys	Asn	Phe	Glu	Arg	Ala	Ala	Glu	Leu	Leu	Ala	Thr	Trp	Thr
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Asp	Lys	Ser	Pro	Leu	Phe	Gln	Glu	Val	Leu	Thr	Arg	Ile	Gln	Val	Arg
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Leu	Gly	Glu	Gly	Trp	Ser	Gln	His	Cys	His	Ser	Gln	His	Ala	Val	Ala
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&lt;213&gt; Homo sapiens

&lt;400&gt; 4059

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&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4060

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4061

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&lt;213&gt; Homo sapiens

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Gln Ala Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr
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Gly Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly
 85           90           95
Ser Tyr Val Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys Asn
100           105           110
Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys Glu Lys
115           120           125
His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu Ile Thr Asn
130           135           140
Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met Tyr Pro His Arg
145           150           155           160
Pro Val Leu Met Val Ile Ser His Ala Ala Pro His Gly Pro Glu Asp
165           170           175
Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro Asn Ala Ser Gln His Ile
180           185           190
Thr Pro Ser Tyr Asn Tyr Ala Pro Asp Pro Asp Lys His Trp Ile Met
195           200           205
Arg Tyr Thr Gly Pro Met Lys Pro Ile His Met Glu Phe Thr Asn Met
210           215           220
Leu Gln Arg Lys Arg Leu Gln Thr Leu Met Ser Val Asp Asp Ser Met
225           230           235           240
Glu Thr Ile Tyr Asn Met Leu Val Glu Thr Gly Glu Leu Asp Asn Thr
245           250           255
Tyr Ile Val Tyr Thr Ala Asp His Gly Tyr His Ile Gly Gln Phe Gly
260           265           270
Leu Val Lys Gly Lys Ser Met Pro Tyr Glu Phe Asp Ile Arg Val Pro
275           280           285
Phe Tyr Val Arg Gly Pro Asn Val Glu Ala Gly Cys Leu Asn Pro His
290           295           300
Ile Val Leu Asn Ile Asp Leu Ala Pro Thr Ile Leu Asp Ile Ala Gly
305           310           315           320
Leu Asp Ile Pro Ala Asp Met Asp Gly Lys Ser Ile Leu Lys Leu Leu
325           330           335
Asp Thr Glu Arg Pro Val Asn Arg Phe His Leu Lys Lys Lys Met Arg
340           345           350
Val Trp Arg Asp Ser Phe Leu Val Glu Arg Gly Lys Leu Leu His Lys
355           360           365
Arg Asp Asn Asp Lys Val Asp Ala Gln Glu Glu Asn Phe Leu Pro Lys

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370					375					380					
Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu	Tyr	Gln	Thr	Ala
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Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val	Glu	Asp	Ala	Thr	Gly
				405						410					415
Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro	Met	Arg	Leu	Gly	Gly	Ser
			420					425					430		
Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys	Tyr	Tyr	Gly	Gln	Gly	Ser	Glu
		435					440					445			
Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp	Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg
	450					455					460				
Arg	Lys	Lys	Xaa	Leu	Gln	Glu	Glu	Xaa	Tyr	Lys	Ala	Ser	Tyr	Val	Arg
465					470					475					480
Asn	Arg	Ser	Ile	Arg	Ser	Val	Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr
			485						490					495	
His	Val	Gly	Leu	Gly	Asp	Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg
		500						505					510		
His	Trp	Pro	Gly	Ala	Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp
	515						520					525			
Xaa	Ser	Val	Ala	Leu	Glu	Ala	Phe	Pro	Thr	Thr	Gln	Pro	Pro	Thr	Xaa
	530					535					540				
Ile	Lys	Val	Thr	His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln
545					550					555					560
Cys	Asp	Leu	Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys
			565						570					575	
Leu	His	Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn
		580						585					590		
Leu	Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys
	595					600					605				
Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu	Lys
	610					615					620				
His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln	Glu	Lys
625					630					635					640
Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys	Lys	Leu	Arg
		645							650					655	
Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys	Ser	Met	Pro	Gly
		660						665					670		
Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp	Gln	Thr	Ala	Pro	Phe
	675						680					685			
Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr	Ser	Ala	Asn	Asn	Asn	Thr
	690					695					700				
Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu	Thr	His	Asn	Phe	Leu	Phe	Cys
705					710					715					720
Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu	Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro
		725							730			</			

3254

	100		105		110										
Lys	Gly	Tyr	Glu	Glu	Asp	Val	Gly	Arg	Met	Thr	Met	Ile	Arg	Val	Val
	115		120		125										
Ser	His	Thr	Ser	Val	Pro	Leu	Leu	Leu	Lys	Asn	Pro	Asp	Tyr	Phe	Phe
	130		135		140										
Lys	Glu	Ala	Asn	Thr	Thr	Ile	Tyr	Val	Ile	Trp	Gly	Pro	Phe	Arg	Asn
145			150		155										160
Met	Arg	Lys	Asp	Gly	Asn	Gly	Ile	Val	Tyr	Asn	Met	Leu	Lys	Lys	Thr
			165		170										175
Val	Gly	Ile	Tyr	Pro	Asn	Ala	Gln	Ile	Tyr	Val	Thr	Thr	Glu	Lys	Arg
			180		185										190
Met	Ser	Tyr	Cys	Asp	Gly	Val	Leu	Arg	Arg	Lys	Xaa	Gly	Lys	Asp	Ser
	195		200												205
Thr	Glu														
	210														

&lt;210&gt; 4067

&lt;211&gt; 1800

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4067

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120
tcgccttccc gtgttctcca tcttcgaaaa attccatgtg atgtcaccga agcagagatc
180
atatcattag gtctaccatt tggcaaagta actaatcttt tgatgttgaa aggaaaaagc
240
caggctttct tagaaatggc ttctgaggaa gctgccgtta ctatggtgaa ttattacact
300
cctattactc ctcaccttcg aagccagcct gtttatattc agtattccaa tcacagagaa
360
cttaagactg acaatctacc taatcaagct cgagcccaag ctgcactgca ggctgtcagt
420
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660
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720
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960

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 1080  
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&lt;210&gt; 4068

&lt;211&gt; 521

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4068

Met	Asn	Ser	Ser	Thr	Pro	Ser	Thr	Ala	Asn	Gly	Asn	Asp	Ser	Lys	Lys
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Phe	Lys	Arg	Asp	Arg	Pro	Pro	Cys	Ser	Pro	Ser	Arg	Val	Leu	His	Leu
		20						25					30		
Arg	Lys	Ile	Pro	Cys	Asp	Val	Thr	Glu	Ala	Glu	Ile	Ile	Ser	Leu	Gly
		35					40					45			
Leu	Pro	Phe	Gly	Lys	Val	Thr	Asn	Leu	Leu	Met	Leu	Lys	Gly	Lys	Ser
	50					55					60				
Gln	Ala	Phe	Leu	Glu	Met	Ala	Ser	Glu	Glu	Ala	Ala	Val	Thr	Met	Val
65					70					75				80	
Asn	Tyr	Tyr	Thr	Pro	Ile	Thr	Pro	His	Leu	Arg	Ser	Gln	Pro	Val	Tyr
			85					90					95		
Ile	Gln	Tyr	Ser	Asn	His	Arg	Glu	Leu	Lys	Thr	Asp	Asn	Leu	Pro	Asn
		100						105				110			
Gln	Ala	Arg	Ala	Gln	Ala	Ala	Leu	Gln	Ala	Val	Ser	Ala	Val	Gln	Ser
		115					120					125			
Gly	Ser	Leu	Ala	Leu	Ser	Gly	Gly	Pro	Ser	Asn	Glu	Gly	Thr	Val	Leu
	130					135					140				
Pro	Gly	Gln	Ser	Pro	Val	Leu	Arg	Ile	Ile	Ile	Glu	Asn	Leu	Phe	Tyr

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145          150          155          160
Pro Val Thr Leu Glu Val Leu His Gln Ile Phe Ser Lys Phe Gly Thr
          165          170          175
Val Leu Lys Ile Ile Thr Phe Thr Lys Asn Asn Gln Phe Gln Ala Leu
          180          185          190
Leu Gln Tyr Ala Asp Pro Val Asn Ala His Tyr Ala Lys Met Ala Leu
          195          200          205
Asp Gly Gln Asn Ile Tyr Asn Ala Cys Cys Thr Leu Arg Ile Asp Phe
          210          215          220
Ser Lys Leu Thr Ser Leu Asn Val Lys Tyr Asn Asn Asp Lys Ser Arg
          225          230          235          240
Asp Phe Thr Arg Leu Asp Leu Pro Thr Gly Asp Gly Gln Pro Ser Leu
          245          250          255
Glu Pro Pro Met Ala Ala Ala Phe Gly Ala Pro Gly Ile Ile Ser Ser
          260          265          270
Pro Tyr Ala Gly Ala Ala Gly Phe Ala Pro Ala Ile Gly Phe Pro Gln
          275          280          285
Ala Thr Gly Leu Ser Val Pro Ala Val Pro Gly Ala Leu Gly Pro Leu
          290          295          300
Thr Ile Thr Ser Ser Ala Val Thr Gly Arg Met Ala Ile Pro Gly Ala
          305          310          315          320
Ser Gly Ile Pro Gly Asn Ser Val Leu Leu Val Thr Asn Leu Asn Pro
          325          330          335
Asp Leu Ile Thr Pro His Gly Leu Phe Ile Leu Phe Gly Val Tyr Gly
          340          345          350
Asp Val His Arg Val Lys Ile Met Phe Asn Lys Lys Glu Asn Ala Leu
          355          360          365
Val Gln Met Ala Asp Ala Asn Gln Ala Gln Leu Ala Met Asn His Leu
          370          375          380
Ser Gly Gln Arg Leu Tyr Gly Lys Val Leu Arg Ala Thr Leu Ser Lys
          385          390          395          400
His Gln Ala Val Gln Leu Pro Arg Glu Gly Gln Glu Asp Gln Gly Leu
          405          410          415
Thr Lys Asp Phe Ser Asn Ser Pro Leu His Arg Phe Lys Lys Pro Gly
          420          425          430
Ser Lys Asn Phe Gln Asn Ile Phe Pro Pro Ser Ala Thr Leu His Leu
          435          440          445
Ser Asn Ile Pro Pro Ser Val Thr Val Asp Asp Leu Lys Asn Leu Phe
          450          455          460
Ile Glu Ala Gly Cys Ser Val Lys Ala Phe Lys Phe Phe Gln Lys Asp
          465          470          475          480
Arg Lys Met Ala Leu Ile Gln Leu Gly Ser Val Glu Glu Ala Ile Gln
          485          490          495
Ala Leu Ile Glu Leu His Asn His Asp Leu Gly Glu Asn His His Leu
          500          505          510
Arg Val Ser Phe Ser Lys Ser Thr Ile
          515          520

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&lt;210&gt; 4069

&lt;211&gt; 714

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4069

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 120  
 ttccagcaca ccagcatct ggcaatatca aagcataatc ttatgttccT ttataccatc  
 180  
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 240  
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 360  
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 420  
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 480  
 ttttctatgt atgtgatgtg aaatgaagac tatatatatg gaatggaggt gacagaaaGa  
 540  
 aagaaattct ttgtttgagg gagacttccc ctttctggat tgtatttgta gagtgttacg  
 600  
 agtgtatcat gtgattatgc tttaccggta taagagattc tgttgtgatt atttgaatag  
 660  
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 714

&lt;210&gt; 4070

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4070

Met	Ser	Tyr	Pro	Ala	Lys	Val	Thr	Leu	Leu	Gly	Ser	Val	Ile	Phe	Thr
1				5					10					15	
Phe	Gln	His	Thr	Gln	His	Leu	Ala	Ile	Ser	Lys	His	Asn	Leu	Met	Phe
			20					25					30		
Leu	Tyr	Thr	Ile	Phe	Ile	Val	Ala	Thr	Lys	Ile	Thr	Met	Met	Thr	Thr
		35				40					45				
Gln	Thr	Ser	Thr	Met	Thr	Phe	Ala	Pro	Phe	Glu	Asp	Thr	Leu	Ser	Trp
	50				55					60					
Met	Leu	Phe	Gly	Trp	Gln	Gln	Pro	Phe	Ser	Ser	Cys	Glu	Lys	Lys	Ser
65				70					75					80	
Glu	Ala	Lys	Ser	Pro	Ser	Asn	Gly	Val	Gly	Ser	Leu	Ala	Ser	Lys	Pro
			85				90						95		
Val	Asp	Val	Ala	Ser	Asp	Asn	Val	Lys	Lys	Lys	His	Thr	Lys	Lys	Asn
		100					105						110		

Glu

&lt;210&gt; 4071

&lt;211&gt; 601

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4071

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 120  
 catccacgat tgcctgtagt tcttcagggc actgcccctc cagctggaga cgtgcatcac  
 180  
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 240  
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 300  
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 360  
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 420  
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 480  
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 600  
 c  
 601

<210> 4072

<211> 175

<212> PRT

<213> Homo sapiens

<400> 4072

Met	Val	His	Arg	Arg	Gly	Trp	Pro	Ser	Cys	Leu	Ala	Arg	Gly	Gly	Arg
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Cys	Ala	Leu	Val	Pro	Arg	Leu	Val	Arg	Met	Lys	Val	Phe	His	Leu	Ser
			20					25					30		
Leu	Ser	Gln	Ser	Val	Val	Leu	Arg	His	His	Trp	Ile	Leu	Pro	Phe	Val
		35					40					45			
Gln	Ala	Leu	Lys	Ala	Arg	Met	Thr	Ser	Phe	His	Arg	Phe	Phe	Phe	Thr
		50				55					60				
Ala	Asn	Gln	Val	Lys	Ile	Tyr	Thr	Asn	Gln	Glu	Lys	Thr	Arg	Thr	Phe
65					70				75					80	
Ile	Gly	Leu	Glu	Val	Thr	Ser	Gly	His	Ala	Gln	Phe	Leu	Asp	Leu	Val
			85					90					95		
Ser	Glu	Val	Asp	Arg	Val	Met	Glu	Glu	Phe	Asn	Leu	Thr	Thr	Phe	Tyr
			100				105						110		
Gln	Asp	Pro	Ser	Phe	His	Leu	Ser	Leu	Ala	Trp	Cys	Val	Gly	Asp	Ala
		115					120					125			
Arg	Leu	Gln	Leu	Glu	Gly	Gln	Cys	Leu	Gln	Glu	Leu	Gln	Ala	Ile	Val
		130				135					140				
Asp	Gly	Phe	Glu	Asp	Ala	Glu	Val	Leu	Leu	Arg	Val	His	Thr	Glu	Gln
145					150				155					160	
Val	Arg	Cys	Lys	Ser	Gly	Asn	Lys	Phe	Phe	Ser	Met	Pro	Leu	Lys	
			165					170						175	

<210> 4073

<211> 1864

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4073

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240  
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360  
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420  
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480  
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540  
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1440  
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 1620  
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 1680  
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 1800  
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 1860  
 attg  
 1864

<210> 4074

<211> 456

<212> PRT

<213> Homo sapiens

<400> 4074

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Asp	Gln	Ser	Asn	Ala	Glu	Lys	His	Ala	Asp	Gly	Met	Ile	Ser	Thr	Ile
			20					25					30		
Asn	Pro	Val	Asp	Ala	Ile	Tyr	Gln	Pro	Ser	Pro	Leu	Glu	Pro	Val	Ile
		35					40					45			
Ser	Thr	Met	Pro	Ser	Gln	Thr	Val	Leu	Pro	Pro	Glu	Pro	Val	Gln	Leu
	50					55					60				
Cys	Lys	Ser	Glu	Gln	Arg	Pro	Ser	Ser	Leu	Pro	Val	Gly	Pro	Val	Leu
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&lt;210&gt; 4075

&lt;211&gt; 2492

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4075

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<211> 410

<212> PRT

<213> Homo sapiens

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Pro	Gly	Ala	Ser	Gly	Met	Val	Ala	Pro	Met	Ala	Met	Pro	Ala	Gly	Tyr

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Gln Met Thr Gln Gln Met Ala Gly Met Asn Phe Tyr Gly Ala Asn Gly
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Thr Cys Arg Glu Ala Met Glu Ala Arg Leu Leu Leu Gln Leu Gln Asp
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Arg Gln His Phe Val Glu Asn Asp Glu Met Tyr Ser Val Gln Asp Leu
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Leu Asp Val His Ala Gly Arg Leu Gly Cys Ser Leu Thr Glu Ile His
      100                105                110
Thr Leu Phe Ala Lys His Ile Lys Leu Asp Cys Glu Arg Cys Gln Ala
      115                120                125
Lys Gly Phe Val Cys Glu Leu Cys Arg Glu Gly Asp Val Leu Phe Pro
      130                135                140
Phe Asp Ser His Thr Ser Val Cys Ala Asp Cys Ser Ala Val Phe His
145      150                155                160
Arg Asp Cys Tyr Tyr Asp Asn Ser Thr Thr Cys Pro Lys Cys Ala Arg
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&lt;211&gt; 783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4079

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<210> 4081

<211> 645

<212> DNA

<213> Homo sapiens

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&lt;210&gt; 4084

&lt;211&gt; 362

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4084

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&lt;211&gt; 2673

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4085

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<213> Homo sapiens

<400> 4086

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			20					25					30		
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Gly	Thr	Lys	Asp	Pro	Ser	Arg	Asn	Arg	Tyr	Lys	Leu	Phe	Leu	Glu	Cys
			50				55				60				
Thr	Leu	Ile	Leu	Thr	Ser	Val	Val	Pro	Pro	Glu	Leu	Pro	Ile	Glu	Leu
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Ser	Leu	Ala	Val	Asn	Thr	Ser	Leu	Ile	Ala	Leu	Ala	Lys	Leu	Tyr	Met
			85					90					95		
Tyr	Cys	Thr	Glu	Pro	Phe	Arg	Ile	Pro	Phe	Ala	Gly	Lys	Val	Glu	Val
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Cys	Cys	Phe	Asp	Lys	Thr	Gly	Thr	Leu	Thr	Ser	Asp	Ser	Leu	Val	Val
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Arg	Gly	Val	Ala	Gly	Leu	Arg	Asp	Gly	Lys	Glu	Val	Thr	Pro	Val	Ser
			130				135					140			
Ser	Ile	Pro	Val	Glu	Thr	His	Arg	Ala	Leu	Ala	Ser	Cys	His	Ser	Leu
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Pro	Arg	Ser	Ile	Lys	Thr	Gln	Gly	Leu	Lys	Ile	His	Gln	Arg	Phe	His

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Val	Asp	Leu	Tyr	Lys	Glu	Phe	Glu	Pro	Ser	Leu	Val	Asn	Ser	Thr	Val
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Lys	Gly	Pro	Pro	Phe	Met	Glu	Ser	Leu	Pro	Glu	Asn	Lys	Pro	Leu	Val
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Ser	Ser	Pro	Asp	Phe	Asn	Ser	Gln	Phe	Gly	Leu	Val	Asp	Ile	Pro	Val
				740					745					750	
Glu	Phe	Lys	Leu	Val	Ile	Ala	Gln	Val	Leu	Leu	Leu	Asp	Phe	Cys	Leu
				755					760					765	
Ala	Leu	Leu	Ala	Asp	Arg	Val	Leu	Gln	Phe	Phe	Leu	Gly	Thr	Pro	Lys
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<211> 959
<212> DNA
<213> Homo sapiens
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<211> 319

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Ala	Val	Ala	Arg	Val	Arg	Ser	Ala	Gly	Pro	Ser	Cys	Gln	Asn	Lys	Gly
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Asp	Leu	Val	Met	Glu	Ala	Leu	Leu	Glu	Gly	Ile	Gln	Asn	Arg	Gly	His
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Gly	Gly	Gly	Phe	Leu	Thr	Ser	Cys	Glu	Ala	Glu	Leu	Gln	Glu	Leu	Met
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Lys	Gln	Ile	Asp	Ile	Met	Val	Ala	His	Lys	Lys	Ser	Glu	Trp	Glu	Gly
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Arg	Thr	His	Ala	Leu	Glu	Thr	Cys	Leu	Lys	Ile	Arg	Glu	Gln	Glu	Leu
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1080  
ttaagtgagc ataagtaaca agatgcaaca gcctctggcc aagttttgaa gattttgttt  
1140  
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1200  
ggtctcaaga gccacaattc tagacttcta ggatgtcagg agccatgctc ttaagcttct  
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1380  
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1526

&lt;210&gt; 4092

&lt;211&gt; 146

&lt;212&gt; PRT

<213> Homo sapiens

<400> 4092

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His Gly Gly Tyr Thr Gly Ser Gly Pro Gly Phe Gly Glu Pro Arg Asp
 1           5           10           15
Ser Gly Ala Glu Val Pro Ser Gly Ser Gly Arg Ala Thr Gly Cys Glu
 20           25           30
Arg Gly Gly Val Arg Gly Ala Arg Gln Gly Arg Ala Pro Gly Ser Ser
 35           40           45
Ile Trp Arg Lys Glu Pro Arg Met Val Cys Thr Arg Lys Thr Lys Thr
 50           55           60
Leu Val Ser Thr Cys Val Ile Leu Ser Gly Met Thr Asn Ile Ile Cys
 65           70           75           80
Leu Leu Tyr Val Gly Trp Val Thr Asn Tyr Ile Ala Ser Val Tyr Val
 85           90           95
Arg Gly Gln Glu Pro Ala Pro Asp Lys Lys Leu Glu Glu Asp Lys Gly
100           105           110
Asp Thr Leu Lys Ile Ile Glu Arg Leu Asp His Leu Glu Asn Val Ile
115           120           125
Lys Gln His Ile Gln Gly Tyr Arg Arg Asn Phe Ser Leu Leu Asn Val
130           135           140
Ser Asn
145

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<210> 4093

<211> 1519

<212> DNA

<213> Homo sapiens

<400> 4093

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120
gaggaaaaga ggccggggcg cgctgggggg tgagagcatg agggaggccg gggggggctg
180
cttgagcgc tgctagggag cgggtgccgc gcacaccgc ctgggcgcg cggagggcg
240
ggagcgggca ggtcgcgcct cggcgcagcg accgccggga gctgttctga tttccgacgc
300
gcacctaggg gcccgagca gccccgcgc cggcgcgcgc ccgacatggg caacgcaggg
360
agcatggatt cgcagcagac cgatttcagg gcgcacaacg tgcctttgaa gctgccgatg
420
ccagagccag gtgaactgga ggagcgattt gccatcgtgc tgaacgctat gaacctacct
480
cctgacaaaag ccaggttact gcggcagtat gataatgaga aaaaatggga actgatttgt
540
gatcaggaac gattccaggt gaagaatcct cccatacat acattcaaaa gctcaaaggc
600
tatctggatc cagctgtaac caggaagaaa ttcagacggc gtgttcaaga atctacacaa
660
gtgctaagag aactggaaat ttctttaaga actaaccaca ttggatgggt cagagaattt
720

```

ctgaatgaag aaaacaaagg tcttgatggt ctagtggaat atctctcatt tgcacagtac  
 780  
 gcggttaactt ttgactttga aagtgtggag agtactgtgg agagctcggg ggacaaatca  
 840  
 aagccctgga gtaggtccat cgaggacctg cacagaggga gcaacctgcc ctcacctgtg  
 900  
 ggcaacagtg tctcccgttc tggaagacat tctgcactgc gatataatac attgccaagc  
 960  
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 1380  
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&lt;210&gt; 4094

&lt;211&gt; 391

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4094

Met	Gly	Asn	Ala	Gly	Ser	Met	Asp	Ser	Gln	Gln	Thr	Asp	Phe	Arg	Ala
1				5					10					15	
His	Asn	Val	Pro	Leu	Lys	Leu	Pro	Met	Pro	Glu	Pro	Gly	Glu	Leu	Glu
			20					25					30		
Glu	Arg	Phe	Ala	Ile	Val	Leu	Asn	Ala	Met	Asn	Leu	Pro	Pro	Asp	Lys
	35						40					45			
Ala	Arg	Leu	Leu	Arg	Gln	Tyr	Asp	Asn	Glu	Lys	Lys	Trp	Glu	Leu	Ile
	50				55						60				
Cys	Asp	Gln	Glu	Arg	Phe	Gln	Val	Lys	Asn	Pro	Pro	His	Thr	Tyr	Ile
65					70					75				80	
Gln	Lys	Leu	Lys	Gly	Tyr	Leu	Asp	Pro	Ala	Val	Thr	Arg	Lys	Lys	Phe
			85					90					95		
Arg	Arg	Arg	Val	Gln	Glu	Ser	Thr	Gln	Val	Leu	Arg	Glu	Leu	Glu	Ile
			100					105					110		
Ser	Leu	Arg	Thr	Asn	His	Ile	Gly	Trp	Val	Arg	Glu	Phe	Leu	Asn	Glu
	115					120						125			
Glu	Asn	Lys	Gly	Leu	Asp	Val	Leu	Val	Glu	Tyr	Leu	Ser	Phe	Ala	Gln
	130				135						140				
Tyr	Ala	Val	Thr	Phe	Asp	Phe	Glu	Ser	Val	Glu	Ser	Thr	Val	Glu	Ser

```

145          150          155          160
Ser Val Asp Lys Ser Lys Pro Trp Ser Arg Ser Ile Glu Asp Leu His
          165          170          175
Arg Gly Ser Asn Leu Pro Ser Pro Val Gly Asn Ser Val Ser Arg Ser
          180          185          190
Gly Arg His Ser Ala Leu Arg Tyr Asn Thr Leu Pro Ser Arg Arg Thr
          195          200          205
Leu Lys Asn Ser Arg Leu Val Ser Lys Lys Asp Asp Val His Val Cys
          210          215          220
Ile Met Cys Leu Arg Ala Ile Met Asn Tyr Gln Tyr Gly Phe Asn Met
225          230          235          240
Val Met Ser His Pro His Ala Val Asn Glu Ile Ala Leu Ser Leu Asn
          245          250          255
Asn Lys Asn Pro Arg Thr Lys Ala Leu Val Leu Glu Leu Leu Ala Ala
          260          265          270
Val Cys Leu Val Arg Gly Gly His Glu Ile Ile Leu Ser Ala Phe Asp
          275          280          285
Asn Phe Lys Glu Val Cys Gly Glu Lys Gln Arg Phe Glu Lys Leu Met
          290          295          300
Glu His Phe Arg Asn Glu Asp Asn Asn Ile Asp Phe Met Val Ala Ser
305          310          315          320
Met Gln Phe Ile Asn Ile Val Val His Ser Val Glu Asp Met Asn Phe
          325          330          335
Arg Val His Leu Gln Tyr Glu Phe Thr Lys Leu Gly Leu Asp Glu Tyr
          340          345          350
Leu Asp Lys Leu Lys His Thr Glu Ser Asp Lys Leu Gln Val Gln Ile
          355          360          365
Gln Ala Tyr Leu Asp Asn Val Phe Asp Val Gly Ala Leu Leu Glu Asp
          370          375          380
Ala Glu Thr Lys Asn Ala Ala
385          390

```

```

<210> 4095
<211> 253
<212> DNA
<213> Homo sapiens

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120
agagagatca agtagcatcc ccagcgaaat ctgaggcctc tggaggcgcc tgtgcacgtg
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tgtctggaag tgtgtgtcca ggcagcatat ctgcatgtgt gtgcctgtcc agacagcata
240
tctgtgcacg cgt
253

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<210> 4096
<211> 83
<212> PRT
<213> Homo sapiens

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&lt;400&gt; 4096

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Met Gly Gly Gly Glu Gln Ala Ser Ala Gly Arg Val Pro Lys Arg Gln
 1           5           10           15
Pro Arg Glu Gln Gly Gln Ile Val Gly Gly Gly Phe Ser Ser Thr Val
          20           25           30
Gln Val Arg Lys Leu Arg Leu Lys Arg Asp Gln Val Ala Ser Pro Ala
          35           40           45
Lys Ser Glu Ala Ser Gly Gly Ala Cys Ala Arg Val Ser Gly Ser Val
          50           55           60
Cys Pro Gly Ser Ile Ser Ala Cys Val Cys Leu Ser Arg Gln His Ile
65           70           75           80
Cys Ala Arg

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&lt;210&gt; 4097

&lt;211&gt; 1385

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4097

```

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120
cgtgctgtcc tcacttggtc tacaatgagt gccaaatctg ctatcagcaa ggaaattttt
180
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240
attcctttct tggcaactgg aggtcaaggc gaatatattaa cttatatctg cctgtcagt
300
acaaacaaga aaccacaca ggcgtccatc acaaaggcca aacagtttga aggtccaca
360
tcatttggtc ggagatcaca gtggatgctc gagcagcttc gccaggttaa tggatcgat
420
cctaattggg attcggcaga gtttgatttg ttgtttgaaa atgcttttga ccagtgggta
480
gccagcacag cgtcagaaaa atgcaccttc ttccagatcc tccaccatac ctgccagagg
540
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600
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660
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720
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780
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840
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900
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960
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1020

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 aacatgtatt tttttctctg atattaagca ggaaggcatt ttaatgtggt gacatcagat  
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 1260  
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 1385

<210> 4098

<211> 258

<212> PRT

<213> Homo sapiens

<400> 4098

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			20					25					30		
Arg	Ala	Arg	Leu	His	Asp	Ser	Leu	Arg	Ala	Val	Leu	Thr	Cys	Ser	Thr
		35					40					45			
Met	Ser	Ala	Lys	Ser	Ala	Ile	Ser	Lys	Glu	Ile	Phe	Ala	Pro	Leu	Asp
	50					55					60				
Glu	Arg	Met	Leu	Gly	Ala	Val	Gln	Val	Lys	Arg	Arg	Thr	Lys	Lys	Lys
65				70					75					80	
Ile	Pro	Phe	Leu	Ala	Thr	Gly	Gly	Gln	Gly	Glu	Tyr	Leu	Thr	Tyr	Ile
			85					90						95	
Cys	Leu	Ser	Val	Thr	Asn	Lys	Lys	Pro	Thr	Gln	Ala	Ser	Ile	Thr	Lys
			100					105					110		
Val	Lys	Gln	Phe	Glu	Gly	Ser	Thr	Ser	Phe	Val	Arg	Arg	Ser	Gln	Trp
	115						120					125			
Met	Leu	Glu	Gln	Leu	Arg	Gln	Val	Asn	Gly	Ile	Asp	Pro	Asn	Gly	Asp
	130					135					140				
Ser	Ala	Glu	Phe	Asp	Leu	Leu	Phe	Glu	Asn	Ala	Phe	Asp	Gln	Trp	Val
145				150					155					160	
Ala	Ser	Thr	Ala	Ser	Glu	Lys	Cys	Thr	Phe	Phe	Gln	Ile	Leu	His	His
			165						170					175	
Thr	Cys	Gln	Arg	Tyr	Leu	Thr	Asp	Arg	Lys	Pro	Glu	Phe	Ile	Asn	Cys
			180					185					190		
Gln	Ser	Lys	Ile	Met	Gly	Gly	Asn	Ser	Ile	Leu	His	Ser	Ala	Ala	Asp
	195						200					205			
Ser	Val	Thr	Ser	Ala	Val	Gln	Lys	Ala	Ser	Gln	Ala	Leu	Asn	Glu	Arg
	210					215					220				
Gly	Glu	Arg	Leu	Gly	Arg	Ala	Glu	Glu	Lys	Thr	Glu	Asp	Leu	Lys	Asn
225				230						235				240	
Ser	Ala	Gln	Gln	Phe	Ala	Glu	Thr	Ala	His	Lys	Leu	Ala	Met	Lys	His
			245					250						255	

Lys Cys

<210> 4099  
 <211> 511  
 <212> DNA  
 <213> Homo sapiens

<400> 4099  
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 120  
 ttaaacaata aaaaattgta taatggaatt ggatcagggg gttcccaaaa cccccttcac  
 180  
 tgaggtttgg caattcactg agaaggactc acaggactca gcagatagtc atacttgggg  
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 300  
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 420  
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 511

<210> 4100  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 4100  
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 Gly Phe Asp Leu Leu His Leu Ile Gln Gln Lys Asp Thr Lys Gln His  
 35 40 45  
 Leu Arg Lys Glu Lys Val His Val Ser Lys Ser Gly Gly Ser Gln Ala  
 50 55 60  
 Gln Ala Thr Gly Val Ile Ser Cys Val Ala Ser Arg Ile Cys Leu Ile  
 65 70 75 80  
 Pro Pro Ala Ser Asn Phe Asp Asp Thr Cys Ala Met Leu Ser Thr Leu  
 85 90 95  
 Pro Glu Phe His  
 100

<210> 4101  
 <211> 536  
 <212> DNA  
 <213> Homo sapiens

<400> 4101



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 120  
 ccaggaaaga tggcacacgg cagacgacga caggaaggac acctgctccc cacccttccc  
 180  
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 300  
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 360  
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 420  
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 480  
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 536

&lt;210&gt; 4102

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4102

Met	Cys	Leu	Leu	Ser	Trp	Thr	Arg	Ile	Ala	Val	Trp	Gly	Pro	Ser	Ala
1				5					10					15	
Arg	Val	Cys	Thr	Arg	Tyr	Lys	Ile	Gln	Glu	Arg	Trp	His	Thr	Ala	Asp
			20					25					30		
Asp	Asp	Arg	Lys	Asp	Thr	Cys	Ser	Pro	Pro	Phe	Pro	Gly	Pro	Arg	His
			35				40					45			
Val	Gln	Asn	Ser	Ser	Trp	Gly	Leu	Gln	Leu	Leu	Gly	Glu	Thr	Gln	Gly
			50				55					60			
Leu	Leu	Leu	His	Ser	Leu	Gln	Gly	Leu	Ser	Arg	Gln	Arg	Pro	Trp	Gly
						70				75					80
Gly	Glu	Ala	Pro	Ala	Trp	Ser	Leu	Pro	Ala	Pro	Pro	Met	Gln	Ala	Val
				85					90					95	
Glu	Gly	Arg	Thr	Arg	Arg	Arg	Thr	Arg	Arg						
				100				105							

&lt;210&gt; 4103

&lt;211&gt; 3040

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4103

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420  
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 2760  
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 ctccggagcc agggaccgcc gcgtcgccga ttagaggacg aggaggagag attccgcacg  
 2880  
 caaccgaaag ggtccttcgg ggctgcgccg ccggcttcct ggaggggtcg gaggtgaggg  
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 tgcagccct gcgggcgggt gtggatgcct ccagccacc ttcccaaacc tgcggcctca  
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 3040

&lt;210&gt; 4104

&lt;211&gt; 978

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4104

Xaa	Ala	Ala	Phe	Pro	Thr	Glu	Asp	Ser	Arg	Thr	Ser	Lys	Glu	Ser	Met
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Ser	Glu	Ala	Asp	Arg	Ala	Gln	Lys	Met	Asp	Gly	Glu	Ser	Glu	Glu	Glu
		20					25						30		
Gln	Glu	Ser	Val	Asp	Thr	Gly	Glu	Glu	Glu	Gly	Gly	Asp	Glu	Ser	
		35				40					45				
Asp	Leu	Ser	Ser	Glu	Ser	Ser	Ile	Lys	Lys	Lys	Ser	Gln	Glu	Glu	Arg
	50					55					60				
Lys	Asp	Arg	Gln	Ser	Leu	Asp	Lys	Pro	Ala	Arg	Lys	Arg	Arg	Arg	Arg

65					70					75				80	
Ser	Arg	Lys	Lys	Pro	Ser	Gly	Ala	Leu	Gly	Ser	Glu	Ser	Tyr	Lys	Ser
				85					90					95	
Ser	Ala	Gly	Ser	Ala	Glu	Gln	Thr	Ala	Pro	Gly	Asp	Ser	Thr	Gly	Tyr
			100					105					110		
Met	Glu	Val	Ser	Leu	Asp	Ser	Leu	Asp	Leu	Arg	Val	Lys	Gly	Ile	Leu
		115					120					125			
Ser	Ser	Gln	Ala	Glu	Gly	Leu	Ala	Asn	Gly	Pro	Asp	Val	Leu	Glu	Thr
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Asp	Gly	Leu	Gln	Glu	Val	Pro	Leu	Cys	Ser	Cys	Arg	Met	Glu	Thr	Pro
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Lys	Ser	Arg	Glu	Ile	Thr	Thr	Leu	Ala	Asn	Asn	Gln	Cys	Met	Ala	Thr
				165					170					175	
Glu	Ser	Val	Asp	His	Glu	Leu	Gly	Arg	Cys	Thr	Asn	Ser	Val	Val	Lys
		180						185					190		
Tyr	Glu	Leu	Met	Arg	Pro	Ser	Asn	Lys	Ala	Pro	Leu	Leu	Val	Leu	Cys
		195					200						205		
Glu	Asp	His	Arg	Gly	Arg	Met	Val	Lys	His	Gln	Cys	Cys	Pro	Gly	Cys
	210					215					220				
Gly	Tyr	Phe	Cys	Thr	Ala	Gly	Asn	Phe	Met	Glu	Cys	Gln	Pro	Glu	Ser
225					230					235				240	
Ser	Ile	Ser	His	Arg	Phe	His	Lys	Asp	Cys	Ala	Ser	Arg	Val	Asn	Asn
				245					250					255	
Ala	Ser	Tyr	Cys	Pro	His	Cys	Gly	Glu	Glu	Ser	Ser	Lys	Ala	Lys	Glu
			260					265					270		
Val	Thr	Ile	Ala	Lys	Ala	Asp	Thr	Thr	Ser	Thr	Val	Thr	Pro	Val	Pro
		275					280					285			
Gly	Gln	Glu	Lys	Gly	Ser	Ala	Xaa	Gly	Gly	Arg	Ala	Asp	Thr	Thr	Thr
	290					295					300				
Gly	Ser	Ala	Xaa	Pro	Gly	His	His	Ser	Arg	Arg	Thr	Thr	Ser	Cys	Arg
305					310					315				320	
Val	Gln	Pro	Pro	Thr	Xaa	Pro	Glu	Gly	Phe	Asp	Pro	Thr	Gly	Pro	Ala
				325					330					335	
Gly	Leu	Gly	Arg	Pro	Thr	Pro	Gly	Leu	Ser	Gln	Gly	Pro	Gly	Lys	Glu
			340					345					350		
Thr	Leu	Glu	Ser	Ala	Leu	Ile	Ala	Leu	Asp	Ser	Glu	Lys	Pro	Lys	Lys
		355					360					365			
Leu	Arg	Phe	His	Pro	Lys	Gln	Leu	Tyr	Phe	Ser	Ala	Arg	Gln	Gly	Glu
	370					375					380				
Leu	Gln	Lys	Val	Leu	Leu	Met	Leu	Val	Asp	Gly	Ile	Asp	Pro	Asn	Phe
385					390					395				400	
Lys	Met	Glu	His	Gln	Asn	Lys	Arg	Ser	Pro	Leu	His	Ala	Ala	Ala	Glu
				405					410					415	
Ala	Gly	His	Val	Asp	Ile	Cys	His	Met	Leu	Val	Gln	Ala	Gly	Ala	Asn
			420					425					430		
Ile	Asp	Thr	Cys	Ser	Glu	Asp	Gln	Arg	Thr	Pro	Leu	Met	Glu	Ala	Ala
		435					440					445			
Glu	Asn	Asn	His	Leu	Glu	Ala	Val	Lys	Tyr	Leu	Ile	Lys	Ala	Gly	Ala
	450					455					460				
Leu	Val	Asp	Pro	Lys	Asp	Ala	Glu	Gly	Ser	Thr	Cys	Leu	His	Leu	Ala
465					470					475				480	
Ala	Lys	Lys	Gly	His	Tyr	Glu	Val	Val	Gln	Tyr	Leu	Leu	Ser	Asn	Gly
				485					490					495	
Arg	Met	Asp	Val	Asn	Cys	Gln	Asp	Asp	Gly	Gly	Trp	Thr	Pro	Met	Ile

				500										510			
Trp	Ala	Thr	Glu	Tyr	Lys	His	Val	Asp	Leu	Val	Lys	Leu	Leu	Leu	Ser		
		515					520					525					
Lys	Gly	Ser	Asp	Ile	Asn	Ile	Arg	Asp	Asn	Glu	Glu	Asn	Ile	Cys	Leu		
	530					535					540						
His	Trp	Ala	Ala	Phe	Ser	Gly	Cys	Val	Asp	Ile	Ala	Glu	Ile	Leu	Leu		
545					550					555					560		
Ala	Ala	Lys	Cys	Asp	Leu	His	Ala	Val	Asn	Ile	His	Gly	Asp	Ser	Pro		
				565					570					575			
Leu	His	Ile	Ala	Ala	Arg	Glu	Asn	Arg	Tyr	Asp	Cys	Val	Val	Leu	Phe		
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Leu	Ser	Arg	Asp	Ser	Asp	Val	Thr	Leu	Lys	Asn	Lys	Glu	Gly	Glu	Thr		
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Pro	Leu	Gln	Cys	Ala	Ser	Leu	Asn	Ser	Gln	Val	Trp	Ser	Ala	Leu	Gln		
	610					615					620						
Met	Ser	Lys	Ala	Leu	Gln	Asp	Ser	Ala	Pro	Asp	Arg	Pro	Ser	Pro	Val		
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Glu	Arg	Ile	Val	Ser	Arg	Asp	Ile	Ala	Arg	Gly	Tyr	Glu	Arg	Ile	Pro		
				645					650					655			
Ile	Pro	Cys	Val	Asn	Ala	Val	Asp	Ser	Glu	Pro	Cys	Pro	Ser	Asn	Tyr		
			660					665					670				
Lys	Tyr	Val	Ser	Gln	Asn	Cys	Val	Thr	Ser	Pro	Met	Asn	Ile	Asp	Arg		
		675					680					685					
Asn	Ile	Thr	His	Leu	Gln	Tyr	Cys	Val	Cys	Ile	Asp	Asp	Cys	Ser	Ser		
	690				695						700						
Ser	Asn	Cys	Met	Cys	Gly	Gln	Leu	Ser	Met	Arg	Cys	Trp	Tyr	Asp	Lys		
705					710					715					720		
Asp	Gly	Arg	Leu	Leu	Pro	Glu	Phe	Asn	Met	Ala	Glu	Pro	Pro	Leu	Ile		
				725					730					735			
Phe	Glu	Cys	Asn	His	Ala	Cys	Ser	Cys	Trp	Arg	Asn	Cys	Arg	Asn	Arg		
			740					745					750				
Val	Val	Gln	Asn	Gly	Leu	Arg	Ala	Arg	Leu	Gln	Leu	Tyr	Arg	Thr	Arg		
		755					760					765					
Asp	Met	Gly	Trp	Gly	Val	Arg	Ser	Leu	Gln	Asp	Ile	Pro	Pro	Gly	Thr		
	770				775						780						
Phe	Val	Cys	Glu	Tyr	Val	Gly	Glu	Leu	Ile	Ser	Asp	Ser	Glu	Ala	Asp		
785					790					795					800		
Val	Arg	Glu	Glu	Asp	Ser	Tyr	Leu	Phe	Asp	Leu	Asp	Asn	Lys	Asp	Gly		
				805					810				815				
Glu	Val	Tyr	Cys	Ile	Asp	Ala	Arg	Phe	Tyr	Gly	Asn	Val	Ser	Arg	Phe		
			820					825					830				
Ile	Asn	His	His	Cys	Glu	Pro	Asn	Leu	Val	Pro	Val	Arg	Val	Phe	Met		
		835					840					845					
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<210> 4105
<211> 775
<212> DNA
<213> Homo sapiens
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<210> 4106
<211> 186
<212> PRT
<213> Homo sapiens
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Lys Arg Met Pro Ser Gly Arg Gly Gly Arg Asp Arg Phe Thr Ala Glu
  20          25          30
Ser Tyr Thr Val Leu Gly Asp Thr Leu Ile Asp Gly Gly Glu His Tyr
  35          40          45
Trp Glu Val Arg Tyr Glu Pro Asp Ser Lys Ala Phe Gly Val Gly Val

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50	55	60
Ala Tyr Arg Ser Leu Gly Arg Phe Glu Gln Leu Gly Lys Thr Ala Ala		
65	70	75
Ser Trp Cys Leu His Ser Thr Ile Gly Cys Arg Ser Ala Ser Arg Lys		80
	85	90
His Ala Asn Lys Val Lys Val Leu Asp Ala Pro Val Pro Asp Cys Leu		95
	100	105
Gly Val His Cys Asp Phe His Gln Gly Leu Leu Ser Phe Tyr Asn Ala		110
	115	120
Arg Thr Lys Gln Val Leu His Thr Phe Lys Thr Arg Phe Thr Gln Pro		125
	130	135
Leu Leu Pro Ala Phe Thr Val Trp Cys Gly Ser Phe Gln Val Thr Thr		140
145	150	155
Gly Leu Gln Val Pro Ser Ala Val Arg Cys Leu Gln Lys Arg Gly Ser		160
	165	170
Ala Thr Ser Ser Ser Asn Thr Ser Leu Thr		175
	180	185

&lt;210&gt; 4107

&lt;211&gt; 1442

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4107

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120
cggtcactg tcgggtcggc gagccacggg ggccgccgca gcaccatggc gaccaccgtc
180
agcactcagc gcgggccggg gtacatcggt gagtcccgaggacttcct ccgcatcacg
240
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420
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480
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540
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660
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900

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 1020  
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 1080  
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 1320  
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 1380  
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 1440  
 aa  
 1442

&lt;210&gt; 4108

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4108

Met	Ala	Thr	Thr	Val	Ser	Thr	Gln	Arg	Gly	Pro	Val	Tyr	Ile	Gly	Glu
1				5					10					15	
Leu	Pro	Gln	Asp	Phe	Leu	Arg	Ile	Thr	Pro	Thr	Gln	Gln	Gln	Arg	Gln
		20						25					30		
Val	Gln	Leu	Asp	Ala	Gln	Ala	Pro	Ser	Ser	Cys	Ser	Thr	Glu	Ala	Gln
		35					40					45			
Gly	Thr	Val	Gly	Arg	Leu	Asn	Ile	Thr	Val	Val	Gln	Ala	Lys	Leu	Ala
		50				55					60				
Lys	Asn	Tyr	Gly	Met	Thr	Arg	Met	Asp	Pro	Tyr	Cys	Arg	Leu	Arg	Leu
65					70				75					80	
Gly	Tyr	Ala	Val	Tyr	Glu	Thr	Pro	Thr	Ala	His	Asn	Gly	Ala	Lys	Asn
				85					90					95	
Pro	Arg	Trp	Asn	Lys	Val	Ile	His	Cys	Thr	Val	Pro	Pro	Gly	Val	Asp
			100					105					110		
Ser	Phe	Tyr	Leu	Glu	Ile	Phe	Asp	Glu	Arg	Ala	Phe	Ser	Met	Asp	Asp
		115					120					125			
Arg	Ile	Ala	Trp	Thr	His	Ile	Thr	Ile	Pro	Glu	Ser	Leu	Arg	Gln	Gly
		130				135					140				
Lys	Val	Glu	Asp	Lys	Trp	Tyr	Ser	Leu	Ser	Gly	Arg	Gln	Gly	Asp	Asp
145					150					155				160	
Lys	Glu	Gly	Met	Ile	Asn	Leu	Val	Met	Ser	Tyr	Ala	Leu	Leu	Pro	Ala
			165					170						175	
Ala	Met	Val	Met	Pro	Pro	Gln	Pro	Val	Val	Leu	Met	Pro	Thr	Val	Tyr
			180					185					190		
Gln	Gln	Gly	Val	Gly	Tyr	Val	Pro	Ile	Thr	Gly	Met	Pro	Ala	Val	Cys
		195					200					205			
Ser	Pro	Gly	Met	Val	Pro	Val	Ala	Leu	Pro	Pro	Ala	Ala	Val	Asn	Ala



210	215	220	
Gln Pro Arg Cys Ser Glu Glu Asp Leu Lys Ala Ile Gln Asp Met Phe			
225	230	235	240
Pro Asn Met Asp Gln Glu Val Ile Arg Ser Val Leu Glu Ala Gln Arg			
	245	250	255
Gly Asn Lys Asp Ala Ala Ile Asn Ser Leu Leu Gln Met Gly Glu Glu			
	260	265	270
Pro			

&lt;210&gt; 4109

&lt;211&gt; 1637

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4109

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 240  
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<210> 4110

<211> 375

<212> PRT

<213> Homo sapiens

<400> 4110

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			20					25					30		
Pro	Ile	Phe	Ser	Leu	Ala	Thr	Pro	Leu	Arg	Ala	Gly	Glu	Glu	Gly	Ser
		35					40					45			
His	Ser	Arg	Lys	Ser	Leu	Cys	Arg	Ser	Arg	Glu	Glu	Leu	Arg	Gly	Lys
	50					55				60					
Val	Arg	Glu	Leu	Ala	Ser	Ala	Val	Arg	Asn	Ala	Lys	Tyr	Leu	Val	Val
65					70				75					80	
Tyr	Thr	Gly	Ala	Gly	Ile	Ser	Thr	Ala	Ala	Ser	Ile	Pro	Asp	Tyr	Arg
			85					90					95		
Gly	Pro	Asn	Gly	Val	Trp	Thr	Leu	Leu	Gln	Lys	Gly	Arg	Ser	Val	Ser
			100					105					110		
Ala	Ala	Asp	Leu	Ser	Glu	Ala	Glu	Pro	Thr	Leu	Thr	His	Met	Ser	Ile
		115					120					125			
Thr	Arg	Leu	His	Glu	Gln	Lys	Leu	Val	Gln	His	Val	Val	Ser	Gln	Asn
		130				135					140				
Cys	Asp	Gly	Leu	His	Leu	Arg	Ser	Gly	Leu	Pro	Arg	Thr	Ala	Ile	Ser
145					150				155					160	
Glu	Leu	His	Gly	Asn	Met	Tyr	Ile	Glu	Val	Cys	Thr	Ser	Cys	Val	Pro
			165					170					175		
Asn	Arg	Glu	Tyr	Val	Arg	Val	Phe	Asp	Val	Thr	Glu	Arg	Thr	Ala	Leu
		180						185					190		
His	Arg	His	Gln	Thr	Gly	Arg	Thr	Cys	His	Lys	Cys	Gly	Thr	Gln	Leu
		195					200					205			
Arg	Asp	Thr	Ile	Val	His	Phe	Gly	Glu	Arg	Gly	Thr	Leu	Gly	Gln	Pro
		210				215					220				
Leu	Asn	Trp	Glu	Ala	Ala	Thr	Glu	Ala	Ala	Ser	Arg	Ala	Asp	Thr	Ile

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Leu Cys Leu Gly Ser	Ser Leu Lys Val	Leu Lys Lys Tyr	Pro Arg Leu			
	245	250	255			
Trp Cys Met Thr Lys	Pro Pro Ala Gly	Gly Arg Leu Tyr	Ile Val Asn			
	260	265	270			
Leu Gln Trp Thr Pro	Lys Asp Asp Trp	Ala Ala Leu Lys	Leu His Gly			
	275	280	285			
Lys Cys Asp Asp Val	Met Arg Leu Leu	Met Ala Glu Leu	Gly Leu Glu			
	290	295	300			
Ile Pro Ala Tyr Ser	Arg Trp Gln Asp	Pro Ile Phe Ser	Leu Ala Thr			
305	310	315	320			
Pro Leu Arg Ala Gly	Glu Glu Gly Ser	His Ser Arg Lys	Ser Leu Cys			
	325	330	335			
Arg Ser Arg Glu Glu	Ala Pro Pro Gly	Asp Arg Gly Ala	Pro Leu Ser			
	340	345	350			
Ser Ala Pro Ile Leu	Gly Gly Trp Phe	Gly Arg Gly Cys	Thr Lys Arg			
	355	360	365			
Thr Lys Arg Lys Lys	Val Thr					
370	375					

&lt;210&gt; 4111

&lt;211&gt; 2599

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4111

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360
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<211> 775

<212> PRT

<213> Homo sapiens

<400> 4112

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Asp	Lys	Ala	Thr	Gly	Ile	Leu	Leu	Tyr	Gly	Leu	Ala	Ser	Arg	Leu	Arg	50	55	60	
Asp	Thr	Arg	Arg	Leu	Ser	Phe	Leu	Val	Ser	Tyr	Ile	Ala	Ser	Lys	Lys	65	70	75	80
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His	Pro	Leu	Asp	Pro	Ile	Asp	Thr	Val	Asp	Phe	Glu	Arg	Glu	Cys	Gly	100	105	110	
Val	Gly	Val	Ile	Val	Thr	Pro	Glu	Gln	Ile	Glu	Glu	Ala	Val	Glu	Ala	115	120	125	
Ala	Ile	Asn	Arg	His	Arg	Pro	Gln	Leu	Leu	Val	Glu	Arg	Tyr	His	Phe	130	135	140	
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Cys Val Glu Ser Leu Glu Val Thr Cys Arg Arg Ala Asp Ala Gly Glu
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Lys Pro Lys Ala Phe Ile His Trp Val Ser Gln Pro Leu Met Cys Glu
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Val Arg Leu Tyr Glu Arg Leu Phe Gln His Lys Asn Pro Glu Asp Pro
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705          710          715          720
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<210> 4113  
 <211> 1894  
 <212> DNA  
 <213> Homo sapiens

<400> 4113  
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<210> 4114

<211> 389

<212> PRT

<213> Homo sapiens

<400> 4114

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Lys	Ala	Leu	Cys	Thr	Ala	His	Glu	Lys	Phe	Cys	Phe	Trp	Pro	Asp	Ser
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Pro	Ser	Pro	Asp	Arg	Phe	Gly	Met	Leu	Pro	Leu	Asp	Glu	Pro	Ala	Ile
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Leu	Gln	Leu	Pro	Ser	Leu	Arg	Pro	Glu	Asp	Leu	Lys	Thr	Met	Cys	Leu
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Thr	Glu	Asp	Lys	Ile	Ser	Leu	Leu	Leu	His	Leu	Leu	Glu	Asp	Glu	Leu
			100						105				110		
Asp	His	Arg	Thr	Asp	Glu	Arg	Lys	Thr	Thr	Ile	Lys	Leu	Gly	Ser	Asp
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	260	265
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	275	280
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	290	295
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Ile Thr Leu Gly Lys Glu Ser Arg Glu Asn Gly Gly Thr Glu Pro Asp		320
	325	330
Ala Ser Ala Pro Ala Glu Pro Gly Trp Lys Ala Val Leu Thr Ile Leu		335
	340	345
Leu Ala His Lys Gln Ser Ser Gln Pro Ala Glu Thr Asp Ser Met Ser		350
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Leu Ser Glu Lys Ser Arg Lys Val Phe Arg Ile Phe Arg Gln Trp Glu		365
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Ser Leu Cys Ser Cys		380
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&lt;210&gt; 4115

&lt;211&gt; 1056

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4115

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 <211> 151  
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 <213> Homo sapiens

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 35 40 45  
 Pro Thr Leu Gly Ser Ser Asn Asn Gln Leu Asn Ser Ser Leu Leu Gln  
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 Val Tyr Ile Pro Asp Tyr Ser Val Arg Ala Leu Ser Asp Leu Gln Phe  
 65 70 75 80  
 Val Lys Ile Ser Arg Gln Gln Tyr Gln Asn Ala Leu Met Ala Ser Arg  
 85 90 95  
 Met Asp Lys Thr Pro Gln Ser Ser Asp Ser Glu Asn Thr Lys Ile Glu  
 100 105 110  
 Leu Thr Leu Thr Glu Leu His Asp Gly Leu Pro Asp Glu Thr Ala Asn  
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 Leu Leu Asn Glu Gln Asn Cys Val Thr His Ser Lys Ala Asn His Ser  
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 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 4118

&lt;211&gt; 128

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4118

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			20					25					30		
Gly	Cys	Gly	Arg	Trp	Pro	Gln	Pro	Pro	Gly	Gly	Ile	Leu	Glu	Trp	Glu
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Arg	Cys	Val	Gly	Cys	Pro	Arg	Pro	Ala	Arg	Pro	Ala	Ser	Pro	Ser	Pro
	50					55					60				
Gly	Glu	Ala	Thr	Pro	Pro	Pro	Ser	Ser	Gly	Ile	Ser	Ala	Val	Lys	Pro
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Pro	Leu	Arg	Ser	Pro	Arg	Thr	Leu	Pro	Leu	Glu	Leu	Gly	Thr	Gly	Gly
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Cys	Val	Cys	Ala	Gly	Leu	Gly	Pro	Asn	Thr	Pro	Gly	Cys	Gln	Leu	His
			100					105					110		
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&lt;211&gt; 649

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

<400> 4120  
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&lt;210&gt; 4122

&lt;211&gt; 494

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4122

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Pro Asp Val Leu Pro Ser Arg Leu His Pro Glu Gly Leu Gly His Gly
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Tyr Leu Cys Val Asn Thr Pro Ser Pro Arg Leu Ala Ala Met Met Leu
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His Arg Asp Leu Lys Ser Asp Asn Ile Leu Val Glu Leu Asp Pro Asp
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&lt;210&gt; 4123

&lt;211&gt; 1095

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4123

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&lt;210&gt; 4124

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4124

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&lt;210&gt; 4125

&lt;211&gt; 4711

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4125

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<211> 820

<212> PRT

<213> Homo sapiens

<400> 4126

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Cys	Glu	Glu	Asp	Gly	Ser	Gln	Ser	Ser	Ser	Glu	Ser	Lys	Met	Val	Ile
			180					185					190		
Arg	Asn	Ala	Ile	Ala	Ser	Ile	Leu	Arg	Ala	Trp	Leu	Asp	Gln	Cys	Ala
		195					200					205			
Glu	Asp	Phe	Arg	Glu	Pro	Pro	His	Phe	Pro	Cys	Leu	Gln	Lys	Leu	Leu
		210				215					220				
Asp	Tyr	Leu	Thr	Arg	Met	Met	Pro	Gly	Ser	Asp	Pro	Glu	Arg	Arg	Ala
225					230					235				240	
Gln	Asn	Leu	Leu	Glu	Gln	Phe	Gln	Lys	Gln	Glu	Val	Glu	Thr	Asp	Asn
				245					250					255	
Gly	Leu	Pro	Asn	Thr	Ile	Ser	Phe	Ser	Leu	Glu	Glu	Glu	Glu	Glu	Leu
			260					265					270		
Glu	Gly	Gly	Glu	Ser	Ala	Glu	Phe	Thr	Cys	Phe	Ser	Glu	Asp	Leu	Val
		275					280					285			
Ala	Glu	Gln	Leu	Thr	Tyr	Met	Asp	Ala	Gln	Leu	Phe	Lys	Lys	Val	Val

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Pro His His Cys Leu Gly Cys Ile Trp Ser Arg Arg Asp Lys Lys Glu				
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Asn Lys His Leu Ala Pro Thr Ile Arg Ala Thr Ile Ser Gln Phe Asn				
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Thr Leu Thr Lys Cys Val Val Ser Thr Ile Leu Gly Gly Lys Glu Leu				
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Lys Thr Gln Gln Arg Ala Lys Ile Ile Glu Lys Trp Ile Asn Ile Ala				
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His Glu Cys Arg Leu Leu Lys Asn Phe Ser Ser Leu Arg Ala Ile Val				
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Ser Ala Leu Gln Ser Asn Ser Ile Tyr Arg Leu Lys Lys Thr Trp Ala				
385		390		395
Ala Val Pro Arg Asp Arg Met Leu Met Phe Glu Glu Leu Ser Asp Ile				
	405		410	415
Phe Ser Asp His Asn Asn His Leu Thr Ser Arg Glu Leu Leu Met Lys				
	420		425	430
Glu Gly Thr Ser Lys Phe Ala Asn Leu Asp Ser Ser Val Lys Glu Asn				
	435		440	445
Gln Lys Arg Thr Gln Arg Arg Leu Gln Leu Gln Lys Asp Met Gly Val				
	450		455	460
Met Gln Gly Thr Val Pro Tyr Leu Gly Thr Phe Leu Thr Asp Leu Thr				
465		470		475
Met Leu Asp Thr Ala Leu Gln Asp Tyr Ile Glu Gly Gly Leu Ile Asn				
	485		490	495
Phe Glu Lys Arg Arg Arg Glu Phe Glu Val Ile Ala Gln Ile Lys Leu				
	500		505	510
Leu Gln Ser Ala Cys Asn Ser Tyr Cys Met Thr Pro Asp Gln Lys Phe				
	515		520	525
Ile Gln Trp Phe Gln Arg Gln Gln Leu Leu Thr Glu Glu Glu Ser Tyr				
	530		535	540
Ala Leu Ser Cys Glu Ile Glu Ala Ala Ala Gly Ala Ser Thr Thr Ser				
545		550		555
Pro Lys Pro Arg Lys Ser Met Val Lys Arg Leu Ser Leu Leu Phe Leu				
	565		570	575
Gly Ser Asp Met Ile Thr Ser Pro Thr Pro Thr Lys Glu Gln Pro Lys				
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Ser Thr Ala Ser Gly Ser Ser Gly Glu Ser Met Asp Ser Val Ser Val				
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Ser Ser Cys Glu Ser Asn His Ser Glu Ala Glu Glu Gly Ser Ile Thr				
	610		615	620
Pro Met Asp Thr Pro Asp Glu Pro Gln Lys Lys Leu Ser Glu Ser Ser				
625		630		635
Ser Ser Cys Ser Ser Ile His Ser Met Asp Thr Asn Ser Ser Gly Met				
	645		650	655
Ser Ser Leu Ile Asn Pro Leu Ser Ser Pro Pro Ser Cys Asn Asn Asn				
	660		665	670
Pro Lys Ile His Lys Arg Ser Val Ser Val Thr Ser Ile Thr Ser Thr				
	675		680	685
Val Leu Pro Pro Val Tyr Asn Gln Gln Asn Glu Asp Thr Cys Ile Ile				
	690		695	700
Arg Ile Ser Val Glu Asp Asn Asn Gly Asn Met Tyr Lys Ser Ile Met				
705		710		715
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&lt;210&gt; 4128

&lt;211&gt; 445

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4128

Pro	Cys	Phe	Leu	Pro	Ser	Ala	Thr	Ser	Lys	Leu	Ser	Gly	Ala	Val	Glu
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Gln	Trp	Leu	Ser	Ala	Ala	Glu	Arg	Leu	Tyr	Gly	Pro	Tyr	Met	Trp	Gly
		20						25				30			
Arg	Tyr	Asp	Ile	Val	Phe	Leu	Pro	Pro	Ser	Phe	Pro	Ile	Val	Ala	Met
		35					40					45			
Glu	Asn	Pro	Cys	Leu	Thr	Phe	Ile	Ile	Ser	Ser	Ile	Leu	Glu	Ser	Asp

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 Glu Phe Leu Val Ile Asp Val Ile His Glu Val Ala His Ser Trp Phe  
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 Gly Asn Ala Val Thr Asn Ala Thr Trp Glu Glu Met Trp Leu Ser Glu  
 85 90 95  
 Gly Leu Ala Thr Tyr Ala Gln Arg Arg Ile Thr Thr Glu Thr Tyr Gly  
 100 105 110  
 Ala Ala Phe Thr Cys Leu Glu Thr Ala Phe Arg Leu Asp Ala Leu His  
 115 120 125  
 Arg Gln Met Lys Leu Leu Gly Glu Asp Ser Pro Val Ser Lys Leu Gln  
 130 135 140  
 Val Lys Leu Glu Pro Gly Val Asn Pro Ser His Leu Met Asn Leu Phe  
 145 150 155 160  
 Thr Tyr Glu Lys Gly Tyr Cys Phe Val Tyr Tyr Leu Ser Gln Leu Cys  
 165 170 175  
 Gly Asp Pro Gln Arg Phe Asp Asp Phe Leu Arg Ala Tyr Val Glu Lys  
 180 185 190  
 Tyr Lys Phe Thr Ser Val Val Ala Gln Asp Leu Leu Asp Ser Phe Leu  
 195 200 205  
 Ser Phe Phe Pro Glu Leu Lys Glu Gln Ser Val Asp Cys Arg Ala Gly  
 210 215 220  
 Leu Glu Phe Glu Arg Trp Leu Asn Ala Thr Gly Pro Pro Leu Ala Glu  
 225 230 235 240  
 Pro Asp Leu Ser Gln Gly Ser Ser Leu Thr Arg Pro Val Glu Ala Leu  
 245 250 255  
 Phe Gln Leu Trp Thr Ala Glu Pro Leu Asp Gln Ala Ala Ala Ser Ala  
 260 265 270  
 Ser Ala Ile Asp Ile Ser Lys Trp Arg Thr Phe Gln Thr Ala Leu Phe  
 275 280 285  
 Leu Asp Arg Leu Leu Asp Gly Ser Pro Leu Pro Gln Glu Val Val Met  
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 Ser Leu Ser Lys Cys Tyr Ser Ser Leu Leu Asp Ser Met Asn Ala Glu  
 305 310 315 320  
 Ile Arg Ile Arg Trp Leu Gln Ile Val Val Arg Asn Asp Tyr Tyr Pro  
 325 330 335  
 Asp Leu His Arg Val Arg Arg Phe Leu Glu Ser Gln Met Ser Arg Met  
 340 345 350  
 Tyr Thr Ile Pro Leu Tyr Glu Asp Leu Cys Thr Gly Ala Leu Lys Ser  
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 Phe Ala Leu Glu Val Phe Tyr Gln Thr Gln Gly Arg Leu His Pro Asn  
 370 375 380  
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 385 390 395 400  
 Thr Glu Pro Ala Ser Glu Pro Ser Thr Glu Leu Gly Lys Ala Glu Ala  
 405 410 415  
 Asp Thr Asp Ser Asp Ala Gln Ala Leu Leu Leu Gly Asp Glu Ala Pro  
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 Ser Ser Ala Ile Ser Leu Arg Asp Val Asn Val Ser Ala  
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&lt;210&gt; 4129

&lt;211&gt; 1749

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



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<210> 4130  
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 <212> PRT  
 <213> Homo sapiens

<400> 4130  
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 Ser Leu Glu Asp Asn Gly Ser Thr Arg Val Thr Pro Ser Val Gln Pro  
 50 55 60  
 His Leu Gln Pro Ile Arg Asn Met Ser Val Ser Arg Thr Met Glu Asp  
 65 70 75 80  
 Ser Cys Glu Leu Asp Leu Val Tyr Val Thr Glu Arg Ile Ile Ala Val  
 85 90 95  
 Ser Phe Pro Ser Thr Ala Asn Glu Glu Asn Phe Arg Ser Asn Leu Arg  
 100 105 110  
 Glu Val Ala Gln Met Leu Lys Ser Lys His Gly Gly Asn Tyr Leu Leu  
 115 120 125  
 Phe Asn Leu Ser Glu Arg Arg Pro Asp Ile Thr Lys Leu His Ala Lys  
 130 135 140  
 Val Leu Glu Phe Gly Trp Pro Asp Leu His Thr Pro Ala Leu Glu Lys  
 145 150 155 160  
 Ile Cys Ser Ile Cys Lys Ala Met Asp Thr Trp Leu Asn Ala Asp Pro  
 165 170 175  
 His Asn Val Val Val Leu His Asn Lys Gly Asn Arg Gly Arg Ile Gly  
 180 185 190  
 Val Val Ile Ala Ala Tyr Met His Tyr Ser Asn Ile Ser Ala Ser Ala  
 195 200 205  
 Asp Gln Ala Leu Asp Arg Phe Ala Met Lys Arg Phe Tyr Glu Asp Lys  
 210 215 220  
 Ile Val Pro Ile Gly Gln Pro Ser Gln Arg Arg Tyr Val His Tyr Phe  
 225 230 235 240  
 Ser Gly Leu Leu Ser Gly Ser Ile Lys Met Asn Asn Lys Pro Leu Phe  
 245 250 255  
 Leu His His Val Ile Met His Gly Ile Pro Asn Phe Glu Ser Lys Gly  
 260 265 270  
 Gly Cys Arg Pro Phe Leu Arg Ile Tyr Gln Ala Met Gln Pro Val Tyr  
 275 280 285  
 Thr Ser Gly Ile Tyr Asn Ile Pro Gly Asp Ser Gln Thr Ser Val Cys  
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          340          345          350
Lys Glu Asp Leu Asp Asp Ala Phe Lys Asp Asp Arg Phe Pro Glu Tyr
          355          360          365
Gly Lys Val Glu Phe Val Phe Ser Tyr Gly Pro Glu Lys Ile Gln Gly
          370          375          380
Met Glu His Leu Glu Asn Gly Pro Ser Val Ser Val Asp Tyr Asn Thr
385          390          395          400
Ser Asp Pro Leu Ile Arg Trp Asp Ser Tyr Asp Asn Phe Ser Gly His
          405          410          415
Arg Asp Asp Gly Met Glu Glu Val Val Gly His Thr Gln Gly Pro Leu
          420          425          430
Asp Gly Ser Leu Tyr Ala Lys Val Lys Lys Lys Asp Ser Leu His Gly
          435          440          445
Ser Thr Gly Ala Val Asn Ala Thr Arg Pro Thr Leu Ser Ala Thr Pro
          450          455          460
Asn His Val Glu His Thr Leu Ser Val Ser Ser Asp Ser Gly Asn Ser
465          470          475          480
Thr Ala Ser Thr Lys Thr Asp Lys Thr Asp Glu Pro Val Pro Gly Ala
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Ser Ser Ala His Ala Ala Arg Thr Val Thr Ile Leu Val Trp Gln Phe
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Ile Val Gln Asp Val Cys Leu Pro Leu Arg Cys
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&lt;210&gt; 4131

&lt;211&gt; 608

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4131

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<212> PRT  
<213> Homo sapiens

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Glu Leu Asp Ser Asp Ser Glu Asp Leu Asp Pro Asn Pro Glu Asp Leu  
50 55 60  
Asp Pro Val Ser Glu Asp Pro Glu Pro Asp Pro Glu Asp Leu Asn Thr  
65 70 75 80  
Val Pro Glu Asp Val Asp Pro Ser Tyr Glu Asp Leu Glu Pro Val Ser  
85 90 95  
Glu Asp Leu Asp Pro Asp Ala Glu Ala Pro Gly Ser Glu Pro Gln Asp  
100 105 110  
Pro Asp Pro Met Ser Ser Ser Phe Asp Leu Asp Pro Asp Val Ile Gly  
115 120 125  
Pro Val Pro Leu Ile Leu Asp Pro Asn Ser Asp Thr Leu Ser Pro Gly  
130 135 140  
Asp Pro Lys Val Asp Pro Xaa Ser Pro Leu Ala Ser Leu Arg Ala Pro  
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Arg Ser Trp Pro Pro Ala Pro Arg Cys Ser Pro Pro Pro Ala Arg  
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Pro Gly Pro Ser Pro Ala Arg Ile Ala Ala Lys Pro Ser Ala Ala Ala  
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Pro Gly

<210> 4133  
<211> 1646  
<212> DNA  
<213> Homo sapiens

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&lt;210&gt; 4134

&lt;211&gt; 329

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4134

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Glu	Glu	His	Ser	Ala	Glu	Pro	Arg	Pro	Arg	Thr	Arg	Ser	Asn	Pro	Glu

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 50 55 60  
 Thr Ser Gly Ala Gly Pro Lys Ser Trp Gln Val Pro Pro Pro Ala Pro  
 65 70 75 80  
 Glu Val Gln Ile Arg Thr Pro Arg Val Asn Cys Pro Glu Lys Val Ile  
 85 90 95  
 Ile Cys Leu Asp Leu Ser Glu Glu Met Ser Leu Pro Lys Leu Glu Ser  
 100 105 110  
 Phe Asn Gly Ser Lys Thr Asn Ala Leu Asn Val Ser Gln Lys Met Ile  
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 Ser Asp Pro Arg Glu Leu Cys Ser Cys Leu Tyr Asp Leu Glu Thr Ala  
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 Lys Thr Glu Leu Pro Val Thr Glu Asn Val Gln Thr Ile Pro Pro Pro  
 195 200 205  
 Tyr Val Val Arg Thr Ile Leu Val Tyr Ser Arg Pro Pro Cys Gln Pro  
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 Gln Phe Ser Leu Thr Glu Pro Met Lys Lys Met Phe Gln Cys Pro Tyr  
 225 230 235 240  
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 Glu Glu Met Ser Trp Lys Asp Met Phe Ala Phe Met Gly Ser Leu Asp  
 260 265 270  
 Thr Lys Gly Thr Ser Tyr Lys Tyr Glu Val Ala Leu Ala Gly Pro Ala  
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 Leu Glu Leu His Asn Cys Met Ala Lys Leu Leu Ala His Pro Leu Gln  
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&lt;210&gt; 4135

&lt;211&gt; 388

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4135

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<210> 4136  
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 <212> PRT  
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 Ser Leu Leu Pro Leu Leu Glu Lys Leu Thr Thr Gly Arg Ile Ala Glu  
 35 40 45  
 Leu Leu Ser Pro Asp Tyr Met Asp Leu Glu Asp Pro Arg Pro Ile Phe  
 50 55 60  
 Asp Trp Met Gln Ile Ile Arg Lys Arg Ala Val Val Tyr Val Gly Leu  
 65 70 75 80  
 Asp Ala Leu Ser Asp Thr Glu Val Ala Ala Ala Val Gly Asn Ser Met  
 85 90 95  
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 Asp Asp Gly Leu Pro Gly Ala Thr Gly Gly Lys  
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 <211> 2255  
 <212> DNA  
 <213> Homo sapiens

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 <211> 353  
 <212> PRT  
 <213> Homo sapiens

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 Val Ser Leu Gly His Leu Glu Ser Ala Arg Val Leu Leu Arg His Lys  
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 Ala Asp Val Thr Lys Glu Asn Arg Gln Gly Trp Thr Val Leu His Glu  
 65 70 75 80  
 Ala Val Ser Thr Gly Asp Pro Glu Met Val Tyr Thr Val Leu Gln His  
 85 90 95  
 Arg Asp Tyr His Asn Thr Ser Met Ala Leu Glu Gly Val Pro Glu Leu  
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 Leu Gln Lys Ile Leu Glu Ala Pro Asp Phe Tyr Val Gln Met Lys Trp  
 115 120 125  
 Glu Phe Thr Ser Trp Val Pro Leu Val Ser Arg Ile Cys Pro Asn Asp  
 130 135 140  
 Val Cys Arg Ile Trp Lys Ser Gly Ala Lys Leu Arg Val Asp Ile Thr  
 145 150 155 160  
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 165 170 175  
 Ile Phe Lys Gly Glu Asp Asn Trp Ala Glu Leu Met Glu Val Asn His  
 180 185 190  
 Asp Asp Lys Val Val Thr Thr Glu Arg Phe Asp Leu Ser Gln Glu Met  
 195 200 205  
 Glu Arg Leu Thr Leu Asp Leu Met Lys Pro Lys Ser Arg Glu Val Glu  
 210 215 220  
 Arg Arg Leu Thr Ser Pro Val Ile Asn Thr Ser Leu Asp Thr Lys Asn  
 225 230 235 240  
 Ile Ala Phe Glu Arg Thr Lys Ser Gly Phe Trp Gly Trp Arg Thr Asp  
 245 250 255  
 Lys Ala Glu Val Val Asn Gly Tyr Glu Ala Lys Val Tyr Thr Val Asn  
 260 265 270  
 Asn Val Asn Val Ile Thr Lys Ile Arg Thr Glu His Leu Thr Glu Glu  
 275 280 285  
 Glu Lys Lys Arg Tyr Lys Ala Asp Arg Asn Pro Leu Glu Ser Leu Leu  
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 Gly Thr Val Glu His Gln Phe Gly Ala Gln Gly Asp Leu Thr Thr Glu  
 305 310 315 320  
 Cys Ala Thr Ala Asn Asn Pro Thr Ala Ile Thr Pro Asp Glu Tyr Phe  
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 <212> PRT  
 <213> Homo sapiens  
  
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 780  
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 840  
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 960  
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 1020  
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 1182

&lt;210&gt; 4142

&lt;211&gt; 311

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4142

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			20					25					30		
Ser	Arg	Val	His	Ile	Tyr	His	His	Thr	Gly	Asn	Asn	Thr	Phe	Arg	Val
		35					40					45			
Val	Gly	Arg	Lys	Ile	Gln	Asp	His	Gln	Val	Val	Ile	Asn	Cys	Ala	Ile
	50					55				60					
Pro	Lys	Gly	Leu	Lys	Tyr	Asn	Gln	Ala	Thr	Gln	Thr	Phe	His	Gln	Trp
65				70				75					80		
Arg	Asp	Ala	Arg	Gln	Val	Tyr	Gly	Leu	Asn	Phe	Gly	Ser	Lys	Glu	Asp
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<210> 4143
<211> 1773
<212> DNA
<213> Homo sapiens
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3328

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 1773

&lt;210&gt; 4144

&lt;211&gt; 231

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4144

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				20				25					30		
Gly	Asp	Glu	Glu	Glu	Phe	Phe	Glu	Ile	Arg	Thr	Glu	Trp	Ser	Asp	Arg
				35				40					45		
Ser	Val	Leu	Tyr	Leu	His	Arg	Ser	Leu	Ala	Asp	Leu	Gly	Arg	Leu	Trp

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Glu Thr Arg Leu Asn Glu Val Glu Lys Leu Leu Lys Thr Ile Ile Ser
      100      105      110
Met Pro Cys Lys Tyr Ser Arg Ser Glu Val Val Leu Thr Phe Phe Glu
      115      120      125
Arg Ser Pro Leu Asp Gln Val Leu Lys Asn Asp Asn Val His Lys Ile
      130      135      140
Gln Pro Ser Phe Gln Ser Pro Val Lys Ile Ser Glu Ile Met Arg Ser
145      150      155      160
Asn Gly Phe Cys Leu Ala Asn Thr Glu Thr Ile Val Ile Asp His Ser
      165      170      175
Ile Pro Asn Gly Arg Asp Gln Gln Leu Gly Val Asp Pro Thr Glu His
      180      185      190
Leu Phe Glu Asn Gly Ser Glu Phe Pro Ser Glu Leu Glu Asp Gly Asp
      195      200      205
Asp Pro Ala Ala Tyr Val Thr Asn Leu Ser Tyr Tyr His Leu Val Pro
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Phe Glu Thr Asp Ile Trp Asp
225      230

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&lt;210&gt; 4145

&lt;211&gt; 400

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4145

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&lt;210&gt; 4146

&lt;211&gt; 133

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4146

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Xaa Thr Leu Glu Met Leu Ala Gly Asp Pro Leu Leu Ser Glu Asp Pro
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Glu Pro Asp Lys Thr Pro Ala Ala Thr Val Thr Asn Glu Ala Ser Cys

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Leu	Asp	Leu	Arg	Leu	Ile	Arg	Thr	Lys	Gly	Gly	Val	Asp	Ala	Ala	Leu
	50		55		60										
Glu	Tyr	Ala	Lys	Thr	Trp	Ser	Arg	Tyr	Ala	Lys	Glu	Leu	Leu	Ala	Trp
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Thr	Glu	Lys	Arg	Ala	Ser	Tyr	Glu	Leu	Glu	Phe	Ala	Lys	Ser	Thr	Met
		85			90				95						
Lys	Ile	Ala	Glu	Ala	Gly	Lys	Val	Ser	Ile	Gln	Gln	Gln	Ser	His	Met
	100		105		110										
Pro	Leu	Gln	Tyr	Ile	Tyr	Thr	Leu	Phe	Leu	Glu	His	Asp	Leu	Ser	Leu
	115		120		125										
Gly	Thr	Leu	Ala	Met											
	130														

&lt;210&gt; 4147

&lt;211&gt; 4892

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4147

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<210> 4148  
 <211> 697  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Glu Gln His Leu Phe Asp Val Asn Asn Ser Gly Gly Gln Ser Ser Glu  
 50 55 60  
 Asp Ser Glu Ser Gly Thr Leu Ser Ala Ser Ser Ala Thr Ser Ala Arg  
 65 70 75 80  
 Gln Arg Arg Arg Gln Ser Lys Glu Gln Asp Glu Val Arg His Gly Arg  
 85 90 95  
 Asp Lys Gly Leu Ile Asn Lys Glu Asn Thr Pro Ser Gly Phe Asn His  
 100 105 110  
 Leu Asp Asp Cys Ile Leu Asn Thr Gln Glu Val Glu Lys Val His Lys  
 115 120 125  
 Asn Thr Phe Gly Cys Ala Gly Glu Arg Ser Lys Pro Lys Arg Gln Lys  
 130 135 140  
 Ser Ser Thr Lys Leu Ser Glu Leu His Asp Asn Gln Asp Gly Leu Val  
 145 150 155 160  
 Asn Met Glu Ser Leu Asn Ser Thr Arg Ser His Glu Arg Thr Gly Pro  
 165 170 175  
 Asp Asp Phe Glu Trp Met Ser Asp Glu Arg Lys Gly Asn Glu Lys Asp



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Leu	Leu	Glu	His	Leu	Gln	Glu	Met	Arg	Glu	Glu	Lys	Lys	Arg	Ile	Arg
625				630					635					640	
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				645					650					655	
Asn	Val	Gln	Lys	Glu	Asp	Arg	Thr	Pro	Met	Ala	Glu	Glu	Tyr	Ser	Glu
				660				665					670		
Tyr	Lys	His	Ile	Lys	Ala	Lys	Leu	Arg	Leu	Leu	Glu	Val	Leu	Ile	Ser
		675					680					685			
Lys	Arg	Asp	Thr	Asp	Ser	Lys	Ser	Met							
690						695									

&lt;210&gt; 4149

&lt;211&gt; 1396

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4149

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<210> 4150  
 <211> 193  
 <212> PRT  
 <213> Homo sapiens

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 His Ile Lys Arg Ile Thr Asp Asn Asp Ile Gln Ser Leu Val Leu Glu  
 35 40 45  
 Ile Glu Gly Thr Asn Val Ser Thr Thr Tyr Ile Thr Cys Pro Ala Asp  
 50 55 60  
 Pro Lys Lys Thr Leu Gly Ile Lys Leu Pro Phe Leu Val Met Ile Ile  
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 Lys Asn Leu Lys Lys Tyr Phe Thr Phe Glu Val Gln Val Leu Asp Asp  
 85 90 95  
 Lys Asn Val Arg Arg Arg Phe Arg Ala Ser Asn Tyr Gln Ser Thr Thr  
 100 105 110  
 Arg Val Lys Pro Phe Ile Cys Thr Met Pro Met Arg Leu Asp Asp Gly  
 115 120 125  
 Trp Asn Gln Ile Gln Phe Asn Leu Leu Asp Phe Thr Arg Arg Ala Tyr  
 130 135 140  
 Gly Thr Asn Tyr Ile Glu Thr Leu Arg Val Gln Ile His Ala Asn Cys  
 145 150 155 160  
 Arg Ile Arg Arg Val Tyr Phe Ser Asp Arg Leu Tyr Ser Glu Asp Glu  
 165 170 175  
 Leu Pro Ala Glu Phe Lys Leu Tyr Leu Pro Val Gln Asn Lys Ala Lys  
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<210> 4151  
 <211> 1372  
 <212> DNA  
 <213> Homo sapiens

<400> 4151  
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 1372

&lt;210&gt; 4152

&lt;211&gt; 97

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4152

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Gly	Cys	Pro	Ala	Val	Arg	Lys	Ala	Ser	Ala	Gly	Ala	Ala	Ala	Ala	Val

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Arg Glu Gly Glu Thr Pro Ala Glu Asp Ala Lys Leu Asp Arg Pro Gly
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Ser Glu Pro Ala Ser Val Ala Pro Asn Gln Asn Leu Leu Cys Ala Pro
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Arg Pro Pro Ser Thr Phe Met Ser Val Leu Leu Leu Arg Gly Gln Val
65                70                75                80
Leu Pro Ser Leu Thr Ala Leu Ala Arg Pro Ala Arg Phe Pro Ser Asn
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Pro

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<210> 4153  
 <211> 395  
 <212> DNA  
 <213> Homo sapiens

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395

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<210> 4154  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

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<400> 4154
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Asn Gly Lys Met Ser Pro Thr Arg Phe His Ala Asn Ser Met Gly Gln
35                40                45
Arg Ser Tyr Ser Phe Glu Ala Ser Glu Glu Asp Leu Asp Val Asn Asp
50                55                60
Lys Val Glu Glu Leu Met Arg Arg Asp Ser Ser Val Ile Lys Glu Glu
65                70                75                80
Ile Lys Ala Phe Leu Ala Asn Arg Arg Ile Ser Gln Ala Val Asp Thr
85                90                95
Ile Gly Lys Met Leu Phe Pro Ser Val His Ser Gly Leu Ile
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<210> 4155  
<211> 1191  
<212> DNA  
<213> Homo sapiens

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420  
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480  
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780  
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1191

<210> 4156  
<211> 233  
<212> PRT  
<213> Homo sapiens

<400> 4156  
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Asn Val Lys Asp Leu Arg Pro Arg Ala Arg Thr Ile Leu Lys Trp Asn			
35	40	45	
Glu Leu Asn Val Gly Asp Val Val Met Val Asn Tyr Asn Val Glu Ser			
50	55	60	
Pro Gly Gln Arg Gly Phe Trp Phe Asp Ala Glu Ile Thr Thr Leu Lys			
65	70	75	80
Thr Ile Ser Arg Thr Lys Lys Glu Leu Arg Val Lys Ile Phe Leu Gly			
85	90	95	
Gly Ser Glu Gly Thr Leu Asn Asp Cys Lys Ile Ile Ser Val Asp Glu			
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Ile Phe Lys Ile Glu Arg Pro Gly Ala His Pro Leu Ser Phe Ala Asp			
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Gly Lys Phe Leu Arg Arg Asn Asp Pro Glu Cys Asp Leu Cys Gly Gly			
130	135	140	
Asp Pro Glu Lys Lys Cys His Ser Cys Ser Cys Arg Val Cys Gly Gly			
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Lys His Glu Pro Asn Met Gln Leu Leu Cys Asp Glu Cys Asn Val Ala			
165	170	175	
Tyr His Ile Tyr Cys Leu Asn Pro Pro Leu Asp Lys Val Pro Glu Glu			
180	185	190	
Glu Tyr Trp Tyr Cys Pro Ser Cys Lys Thr Asp Ser Ser Glu Val Val			
195	200	205	
Lys Ala Gly Glu Arg Leu Lys Met Ser Lys Lys Lys Ala Lys Met Pro			
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Ser Ala Ser Thr Glu Ser Arg Arg Asp			
225	230		

&lt;210&gt; 4157

&lt;211&gt; 3460

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4157

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540

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&lt;211&gt; 463

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4158

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 Cys Gly Glu Asp Gly His Ile Arg Val Gln Cys Ile Asn Pro Ser Asn  
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 <212> DNA  
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<211> 859

<212> PRT

<213> Homo sapiens

<400> 4162

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545					550					555					560
Val	Glu	Asp	Phe	Pro	Val	Cys	Ser	Pro	Asn	Gln	Ala	Ser	Val	Leu	Glu
			565					570						575	
Asn	Leu	Arg	Leu	Ala	Val	Arg	Ser	Gln	Leu	Gly	Phe	Thr	Ser	Val	Arg
		580						585					590		
Leu	Pro	Met	Ala	Gly	Arg	Ser	Ser	Asn	Ile	Trp	Asn	Arg	Ile	Phe	Asn
		595					600					605			
Phe	Ala	Arg	Ser	Arg	His	Ser	Gly	Ser	Leu	Ala	Leu	Val	Ser	Ala	Asp
	610					615					620				
Gly	Asp	Glu	Val	Val	Pro	Ser	Gln	Ser	Thr	Ser	Arg	Glu	Pro	Glu	Arg
625					630					635					640
Asn	His	Thr	His	Arg	Ser	Leu	Phe	Ser	Val	Glu	Ser	Asp	Asp	Thr	Asp
			645					650					655		
Thr	Glu	Asn	Glu	Arg	Arg	Asp	Met	Ala	Gly	Ala	Ser	Gly	Gly	Val	Ala
		660						665					670		
Ala	Pro	Leu	Pro	Gln	Lys	Val	Pro	Pro	Thr	Thr	Ala	Val	Glu	Ala	Thr
		675					680					685			
Val	Gly	Ala	Cys	Ala	Ser	Ser	Ser	Thr	Gln	Ser	Thr	Arg	Gly	Gly	His

690	695	700
Ala Asp Asn Gly Arg Asp Val Thr Ser Val Glu Pro Pro Ser Val Ser		
705	710	715
Pro Ala Arg His Gln Leu Thr Ser Ala Leu Ser Arg Met Thr Gln Gly		720
	725	730
Leu Arg Trp Val Arg Phe Thr Leu Gly Arg Ser Ser Ser Leu Ser Gln		735
	740	745
Asn Gln Ser Pro Leu Arg Gln Leu Asp Asn Gly Val Ser Gly Arg Glu		750
	755	760
Asp Asp Asp Asp Val Glu Met Leu Ile Pro Ile Ser Asp Gly Ser Ser		765
	770	775
Asp Phe Asp Val Asn Asp Cys Ser Arg Pro Leu Leu Asp Leu Ala Ser		780
785	790	795
Asp Gln Gly Gln Gly Leu Arg Gln Pro Tyr Asn Ala Thr Asn Pro Gly		800
	805	810
Val Arg Pro Ser Asn Arg Asp Gly Pro Cys Glu Arg Cys Gly Ile Val		815
	820	825
His Thr Ala Gln Ile Pro Asp Thr Cys Leu Glu Val Thr Leu Lys Asn		830
	835	840
Glu Thr Ser Asp Asp Glu Ala Leu Leu Leu Cys		845
850	855	

&lt;210&gt; 4163

&lt;211&gt; 568

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4163

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&lt;210&gt; 4164

&lt;211&gt; 187

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4164

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 Cys Gly Leu Gln Asp Pro Ala Gly Ser Arg Pro Leu Ser Pro Pro Phe  
 35 40 45  
 Ser Arg Leu Arg Ser Glu Gly Ser Lys Ser Val Leu Pro Gln Trp Leu  
 50 55 60  
 Trp Gly Met Lys Gly Ile Pro Val Pro Ser Gly His Pro Gln Ala Asp  
 65 70 75 80  
 Gly Arg Arg Ala Leu Val Arg Ala Val Gly His Pro Gln Asp Leu Leu  
 85 90 95  
 Thr Glu Ala Ser Pro Arg Cys Pro Ala Gly Pro Ser Pro Leu Arg Ser  
 100 105 110  
 Thr Gly Arg Lys Pro Pro Gly Pro Pro Arg Gly Gly Asp Leu Ala Ala  
 115 120 125  
 Pro Val Leu Phe Lys Ala Trp Ala Thr Ser Leu Ala Cys Pro Lys Trp  
 130 135 140  
 Gln Ala Leu Arg Arg Ala Arg Met Val Pro Val Val Gln Gly Ser Pro  
 145 150 155 160  
 Pro Ala Trp Ala Ala Pro Val Pro Trp Asn Leu Leu Pro Trp Gly Pro  
 165 170 175  
 Trp Thr Cys Arg His Met Ala Ile Glu Leu Gln  
 180 185

&lt;210&gt; 4165

&lt;211&gt; 717

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4165

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 ctgctggact ggcgcaggcg taccctggag agggaggggc cccgtgcctt ctaccgcggc  
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<210> 4166

<211> 166

<212> PRT

<213> Homo sapiens

<400> 4166

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		20					25						30		
Arg	Arg	Thr	Gly	Gln	Tyr	Lys	Gly	Leu	Leu	Asp	Cys	Ala	Arg	Arg	Ile
		35					40					45			
Leu	Glu	Arg	Glu	Gly	Pro	Arg	Ala	Phe	Tyr	Arg	Gly	Tyr	Leu	Pro	Asn
	50					55					60				
Val	Leu	Gly	Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu
65					70					75				80	
Thr	Leu	Lys	Asn	Trp	Trp	Leu	Gln	Gln	Tyr	Ser	His	Asp	Ser	Ala	Asp
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Pro	Gly	Ile	Leu	Val	Leu	Leu	Ala	Cys	Gly	Thr	Ile	Ser	Ser	Thr	Cys
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Gly	Gln	Ile	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	Gln
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Ala	Gln	Gly	Phe	His	His	Val	Ala	Gln	Ala	His	Leu	Glu	Leu	Val	Gly
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Ser	Arg	Asn	Ser	Pro	Ala	Phe	Ser	Leu	Pro	Thr	Cys	Trp	Asp	Tyr	Arg
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<210> 4167

<211> 897

<212> DNA

<213> Homo sapiens

<400> 4167

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480

cttcatgcac gagaaggacg ttatgagcgg agacttgatg gggcttcaga taacagggag  
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 780  
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<211> 299

<212> PRT

<213> Homo sapiens

<400> 4168

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			20					25					30		
Gln	Thr	Ala	Gly	Val	Gln	Trp	Arg	Asp	Leu	Ser	Pro	Pro	Gln	Leu	Pro
		35					40					45			
Pro	Pro	Gly	Ile	Lys	Gln	Ser	Ser	Cys	Phe	Ser	Leu	Leu	Ser	Ser	Leu
	50					55					60				
Asp	Tyr	Arg	Tyr	Gly	Arg	Val	Glu	Ser	Val	Lys	Ile	Leu	Pro	Lys	Arg
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Gly	Ser	Glu	Gly	Gly	Val	Ala	Ala	Phe	Val	Asp	Phe	Val	Asp	Ile	Lys
			85					90						95	
Ser	Ala	Gln	Lys	Ala	His	Asn	Ser	Val	Asn	Lys	Met	Gly	Asp	Arg	Asp
			100					105					110		
Leu	Arg	Thr	Asp	Tyr	Asn	Glu	Pro	Gly	Thr	Ile	Pro	Ser	Ala	Ala	Arg
		115					120					125			
Gly	Leu	Asp	Asp	Thr	Val	Ser	Ile	Ala	Ser	Arg	Ser	Arg	Glu	Val	Ser
		130				135					140				
Gly	Phe	Arg	Gly	Gly	Gly	Gly	Gly	Pro	Ala	Tyr	Gly	Pro	Pro	Pro	Ser
145					150					155					160
Leu	His	Ala	Arg	Glu	Gly	Arg	Tyr	Glu	Arg	Arg	Leu	Asp	Gly	Ala	Ser
			165					170						175	
Asp	Asn	Arg	Glu	Arg	Ala	Tyr	Glu	His	Ser	Ala	Tyr	Gly	His	His	Glu
		180						185				190			
Arg	Gly	Thr	Gly	Gly	Phe	Asp	Arg	Thr	Arg	His	Tyr	Asp	Gln	Asp	Tyr
		195					200					205			
Tyr	Arg	Asp	Pro	Arg	Glu	Arg	Thr	Leu	Gln	His	Gly	Leu	Tyr	Tyr	Ala
	210					215					220				
Ser	Arg	Ser	Arg	Ser	Pro	Asn	Arg	Phe	Asp	Ala	His	Asp	Pro	Arg	Tyr
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Glu	Pro	Arg	Ala	Arg	Glu	Gln	Phe	Thr	Leu	Pro	Ser	Val	Val	His	Arg
			245					250						255	
Asp	Ile	Tyr	Arg	Asp	Asp	Ile	Thr	Arg	Glu	Val	Arg	Gly	Arg	Arg	Pro

	260		265		270
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Ser Arg Asn Gln Ser Pro Gln Arg Leu Ala Ser					
	290		295		

&lt;210&gt; 4169

&lt;211&gt; 4743

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4169

```

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<210> 4170

<211> 900

<212> PRT

<213> Homo sapiens

<400> 4170

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		20					25					30			
Ala	His	Leu	Arg	Ser	His	Gly	Leu	Glu	Pro	Ala	Ala	Pro	Ser	Pro	Arg
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Gly	Pro	Pro	Asn	Ser	Glu	Gly	Lys	Asp	Pro	Ala	Gly	Ala	Tyr	Arg	Ser
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Pro	Ser	Pro	Gln	Gly	Thr	Lys	Ala	Pro	Arg	Phe	Val	Pro	Leu	Thr	Ser
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Ile	Cys	Phe	Pro	Asp	Ser	Leu	Leu	Gln	Asp	Glu	Glu	Arg	Ser	Phe	Phe
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Pro	Pro	Pro	Pro	Pro	Pro	Ala	Pro	Ala	Ser	Glu	Pro	Lys	Gly	Gly	Leu
225						230				235					240
Thr	Ser	Pro	Ile	Phe	Cys	Ser	Thr	Lys	Pro	Lys	Lys	Leu	Leu	Lys	Thr
				245					250					255	
Ser	Ser	Phe	His	Leu	Leu	Arg	Arg	Arg	Asp	Pro	Pro	Phe	Gln	Thr	Pro
		260						265					270		
Lys	Lys	Leu	Tyr	Ala	Gln	Glu	Tyr	Phe	Glu	Ala	Asp	Glu	Asp	Lys	
		275					280				285				
Ala	Asp	Val	Pro	Ala	Asp	Ile	Arg	Leu	Asn	Pro	Arg	Arg	Leu	Pro	Asp

290 295 300  
 Leu Val Ser Ser Cys Arg Ser Arg Pro Ala Leu Ser Pro Leu Gly Asp  
 305 310 315 320  
 Ile Asp Phe Cys Leu Pro Asn Pro Gly Pro Asp Gly Pro Arg Arg Arg  
 325 330 335  
 Gly Arg Lys Pro Thr Lys Ala Lys Arg Asp Gly Pro Pro Arg Pro Arg  
 340 345 350  
 Gly Arg Pro Arg Ile Arg Pro Leu Glu Val Pro Thr Thr Ala Gly Pro  
 355 360 365  
 Ala Ser Ala Ser Thr Pro Thr Asp Gly Ala Lys Lys Pro Arg Gly Arg  
 370 375 380  
 Gly Arg Gly Arg Gly Arg Lys Ala Glu Glu Ala Gly Gly Thr Arg Leu  
 385 390 395 400  
 Glu Pro Leu Lys Pro Leu Lys Ile Lys Leu Ser Val Pro Lys Ala Gly  
 405 410 415  
 Glu Gly Leu Gly Thr Ser Ser Gly Asp Ala Ile Ser Gly Thr Asp His  
 420 425 430  
 Asn Ser Leu Asp Ser Ser Leu Thr Arg Glu Lys Ile Glu Ala Lys Ile  
 435 440 445  
 Lys Glu Val Glu Glu Lys Gln Pro Glu Met Lys Ser Gly Phe Met Ala  
 450 455 460  
 Ser Phe Leu Asp Phe Leu Lys Ser Gly Lys Arg His Pro Pro Leu Tyr  
 465 470 475 480  
 Gln Ala Gly Leu Thr Pro Pro Leu Ser Pro Pro Lys Ser Val Pro Pro  
 485 490 495  
 Ser Val Pro Ala Arg Gly Leu Gln Pro Gln Pro Pro Ala Thr Pro Ala  
 500 505 510  
 Val Pro His Pro Pro Pro Ser Gly Ala Phe Gly Leu Gly Gly Ala Leu  
 515 520 525  
 Glu Ala Ala Glu Ser Glu Gly Leu Gly Leu Gly Cys Pro Ser Pro Cys  
 530 535 540  
 Lys Arg Leu Asp Glu Glu Lys Arg Asn Leu Glu Thr Leu Pro Ser  
 545 550 555 560  
 Phe Ser Ser Asp Glu Glu Asp Ser Val Ala Lys Asn Arg Asp Leu Gln  
 565 570 575  
 Glu Ser Ile Ser Ser Ala Ile Ser Ala Leu Asp Asp Pro Pro Leu Ala  
 580 585 590  
 Gly Pro Lys Asp Thr Ser Thr Pro Asp Gly Pro Pro Leu Ala Pro Ala  
 595 600 605  
 Ala Ala Val Pro Gly Pro Pro Pro Leu Pro Gly Leu Pro Ser Ala Asn  
 610 615 620  
 Ser Asn Gly Thr Pro Glu Pro Pro Leu Leu Glu Glu Lys Pro Pro Pro  
 625 630 635 640  
 Thr Pro Pro Pro Ala Pro Thr Pro Gln Pro Gln Pro Pro Pro Pro Pro  
 645 650 655  
 Pro Pro Pro Gln Pro Ala Leu Pro Ser Pro Pro Pro Leu Val Ala Pro  
 660 665 670  
 Thr Pro Ser Ser Pro Pro Pro Pro Pro Leu Pro Pro Pro Pro Pro Pro  
 675 680 685  
 Ala Met Pro Ser Pro Pro Pro Pro Pro Pro Ala Ala Ala Pro Leu  
 690 695 700  
 Ala Ala Pro Pro Glu Glu Pro Ala Ala Pro Ser Pro Glu Asp Pro Glu  
 705 710 715 720  
 Leu Pro Asp Thr Arg Pro Leu His Leu Ala Lys Lys Gln Glu Thr Ala

725 730 735  
 Ala Val Cys Gly Glu Thr Asp Glu Glu Ala Gly Glu Ser Gly Gly Glu  
 740 745 750  
 Gly Ile Phe Arg Glu Arg Asp Glu Phe Val Ile Arg Ala Glu Asp Ile  
 755 760 765  
 Pro Ser Leu Lys Leu Ala Leu Gln Thr Gly Arg Glu Pro Pro Ile  
 770 775 780  
 Trp Arg Val Gln Lys Ala Leu Leu Gln Lys Phe Thr Pro Glu Ile Lys  
 785 790 795 800  
 Asp Gly Gln Arg Gln Phe Cys Ala Thr Ser Asn Tyr Leu Gly Tyr Phe  
 805 810 815  
 Gly Asp Ala Lys Asn Arg Tyr Gln Arg Leu Tyr Val Lys Phe Leu Glu  
 820 825 830  
 Asn Val Asn Lys Lys Asp Tyr Val Arg Val Cys Ala Arg Lys Pro Trp  
 835 840 845  
 His Arg Pro Pro Val Pro Val Arg Arg Ser Gly Gln Ala Lys Asn Pro  
 850 855 860  
 Val Ser Ala Gly Gly Ser Ser Ala Pro Pro Pro Lys Ala Pro Ala Pro  
 865 870 875 880  
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 Ala Ala Asp Ser  
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<210> 4171  
 <211> 889  
 <212> DNA  
 <213> Homo sapiens

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 480  
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 660  
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cagtcatatg caagatcagg aggggtttcc atcactggaa agatcaaaac tgcactaatt  
 780  
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<210> 4172

<211> 184

<212> PRT

<213> Homo sapiens

<400> 4172

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			20					25					30		
Leu	Val	Ile	Ile	Gly	Thr	Leu	Leu	Ala	Trp	Tyr	Leu	Cys	Phe	Leu	Ile
		35					40					45			
Val	Phe	Ile	Leu	Pro	Leu	Asp	Val	Ser	Thr	Thr	Ile	Tyr	Asn	Arg	Cys
		50				55					60				
Lys	His	Ala	Ala	Gln	Ile	Gln	Ala	Leu	Leu	Arg	Ile	Ala	Thr	Leu	Gln
65				70						75				80	
Asp	Cys	Ala	Thr	Ala	Asn	Pro	Val	Pro	Ser	Gln	His	Pro	Cys	Phe	Lys
			85						90					95	
Pro	Trp	Ser	Tyr	Ile	Pro	Asp	Gly	Ile	Met	Pro	Ile	Phe	Trp	Arg	Val
			100					105						110	
Val	Tyr	Trp	Thr	Ser	Gln	Phe	Leu	Thr	Trp	Ile	Leu	Leu	Pro	Phe	Met
			115				120						125		
Gln	Ser	Tyr	Ala	Arg	Ser	Gly	Gly	Phe	Ser	Ile	Thr	Gly	Lys	Ile	Lys
			130				135					140			
Thr	Ala	Leu	Ile	Glu	Asn	Ala	Ile	Tyr	Tyr	Gly	Thr	Tyr	Leu	Leu	Ile
145				150						155				160	
Phe	Gly	Ala	Phe	Leu	Ile	Tyr	Val	Ala	Val	Asn	Pro	His	Leu	His	Leu
			165					170						175	
Glu	Trp	Asn	Gln	Leu	Gln	Thr	Ile								
			180												

<210> 4173

<211> 404

<212> DNA

<213> Homo sapiens

<400> 4173

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 240  
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 300

catggcatct acaagatgga gactctttcc tgacacacga ccattactac atgctaaatg  
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<210> 4174  
 <211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 4174  
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 20 25 30  
 Gly Thr Pro Val Ser Lys Cys Ala Arg Ala Leu Gly Ser Ala Lys Gly  
 35 40 45  
 Pro Leu Leu Cys Cys Cys Val Gln Ala Trp His Leu Gln Asp Gly Asp  
 50 55 60  
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<210> 4175  
 <211> 2778  
 <212> DNA  
 <213> Homo sapiens

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 180  
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 240  
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 300  
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 420  
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2340

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 2700  
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<210> 4176

<211> 586

<212> PRT

<213> Homo sapiens

<400> 4176

Asn	Ser	Leu	Thr	Leu	Glu	Ala	Val	Lys	Arg	Leu	Ile	Ala	Glu	Gly	Asn
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			20					25					30		
Ala	Gly	Leu	Arg	Ala	Ala	Met	Gly	Pro	Gly	Ile	Ser	Arg	Met	Asn	Asp
		35					40					45			
Leu	Thr	Ile	Ile	Gln	Thr	Thr	Gln	Gly	Phe	Cys	Arg	Tyr	Leu	Glu	Lys
	50				55					60					
Gln	Phe	Ser	Asp	Leu	Lys	Gln	Lys	Gly	Ile	Val	Ile	Ser	Phe	Asp	Ala
65				70					75					80	
Arg	Ala	His	Pro	Ser	Ser	Gly	Gly	Ser	Ser	Arg	Arg	Phe	Ala	Arg	Leu
				85					90					95	
Ala	Ala	Thr	Thr	Phe	Ile	Ser	Gln	Gly	Ile	Pro	Val	Tyr	Leu	Phe	Ser
			100					105					110		
Asp	Ile	Thr	Pro	Thr	Pro	Phe	Val	Pro	Phe	Thr	Val	Ser	His	Leu	Lys
		115				120						125			
Leu	Cys	Ala	Gly	Ile	Met	Ile	Thr	Ala	Ser	His	Asn	Pro	Lys	Gln	Asp
		130				135					140				
Asn	Gly	Tyr	Lys	Val	Tyr	Trp	Asp	Asn	Gly	Ala	Gln	Ile	Ile	Ser	Pro
145				150						155				160	
His	Asp	Lys	Gly	Ile	Ser	Gln	Ala	Ile	Glu	Glu	Asn	Leu	Glu	Pro	Trp
			165						170					175	
Pro	Gln	Ala	Trp	Asp	Asp	Ser	Leu	Ile	Asp	Ser	Ser	Pro	Leu	Leu	His
		180						185					190		
Asn	Pro	Ser	Ala	Ser	Ile	Asn	Asn	Asp	Tyr	Phe	Glu	Asp	Leu	Lys	Lys
		195					200					205			
Tyr	Cys	Phe	His	Arg	Ser	Val	Asn	Arg	Glu	Thr	Lys	Val	Lys	Phe	Val
		210				215					220				
His	Thr	Ser	Val	His	Gly	Val	Gly	His	Ser	Phe	Val	Gln	Ser	Ala	Phe
225				230						235				240	
Lys	Ala	Phe	Xaa	Pro	Cys	Ser	Ser	Xaa	Glu	Ala	Val	Pro	Glu	Gln	Lys



245 250 255  
 Asp Pro Asp Pro Glu Phe Pro Thr Val Lys Tyr Pro Asn Pro Glu Glu  
 260 265 270  
 Gly Lys Gly Val Leu Thr Leu Ser Phe Ala Leu Ala Asp Lys Thr Lys  
 275 280 285  
 Ala Arg Ile Val Leu Ala Asn Asp Pro Asp Ala Asp Arg Leu Ala Val  
 290 295 300  
 Ala Glu Lys Gln Asp Ser Gly Glu Trp Arg Val Phe Ser Gly Asn Glu  
 305 310 315 320  
 Leu Gly Ala Leu Leu Gly Trp Trp Leu Phe Thr Ser Trp Lys Glu Lys  
 325 330 335  
 Asn Gln Asp Arg Ser Ala Leu Lys Asp Thr Tyr Met Leu Ser Ser Thr  
 340 345 350  
 Val Ser Ser Lys Ile Leu Arg Ala Ile Ala Leu Lys Glu Gly Phe His  
 355 360 365  
 Phe Glu Glu Thr Leu Thr Gly Phe Lys Trp Met Gly Asn Arg Ala Lys  
 370 375 380  
 Gln Leu Ile Asp Gln Gly Lys Thr Val Leu Phe Ala Phe Glu Glu Ala  
 385 390 395 400  
 Ile Gly Tyr Met Cys Cys Pro Phe Val Leu Asp Lys Asp Gly Val Ser  
 405 410 415  
 Ala Ala Val Ile Ser Ala Glu Leu Ala Ser Phe Leu Ala Thr Lys Asn  
 420 425 430  
 Leu Ser Leu Ser Gln Gln Leu Lys Ala Ile Tyr Val Glu Tyr Gly Tyr  
 435 440 445  
 His Ile Thr Lys Ala Ser Tyr Phe Ile Cys His Asp Gln Glu Thr Ile  
 450 455 460  
 Lys Lys Leu Phe Glu Asn Leu Arg Asn Tyr Asp Gly Lys Asn Asn Tyr  
 465 470 475 480  
 Pro Lys Ala Cys Gly Lys Phe Glu Ile Ser Ala Ile Arg Asp Leu Thr  
 485 490 495  
 Thr Gly Tyr Asp Asp Ser Gln Pro Asp Lys Lys Ala Val Leu Pro Thr  
 500 505 510  
 Ser Lys Ser Ser Gln Met Ile Thr Phe Thr Phe Ala Asn Gly Gly Val  
 515 520 525  
 Ala Thr Met Arg Thr Ser Gly Thr Glu Pro Lys Ile Lys Tyr Tyr Ala  
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 Glu Leu Cys Ala Pro Pro Gly Asn Ser Asp Pro Glu Gln Leu Lys Lys  
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 Glu Leu Asn Glu Leu Val Ser Ala Ile Glu Glu His Phe Phe Gln Pro  
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&lt;210&gt; 4177

&lt;211&gt; 4763

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4177

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&lt;210&gt; 4178

&lt;211&gt; 398

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4178

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Met Met Leu Lys Gly Ile Thr Arg Leu Ile Ser Arg Ile His Lys Leu
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      20           25           30
Ala Ala His Leu Asp Asn Gln Val Pro Val Glu Ser Pro Arg Ala Ile
      35           40           45
Ser Arg Thr Asn Glu Asn Asp Pro Ala Lys His Gly Asp Gln His Glu
 50           55           60
Gly Gln His Tyr Asn Ile Ser Pro Gln Asp Leu Glu Thr Val Phe Pro
65           70           75           80
His Gly Leu Pro Pro Arg Phe Val Met Gln Val Lys Thr Phe Ser Glu
      85           90           95
Ala Cys Leu Met Val Arg Lys Pro Ala Leu Glu Leu Leu His Tyr Leu
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Lys Asn Thr Ser Phe Ala Tyr Pro Ala Ile Arg Tyr Leu Leu Tyr Gly
      115          120          125
Glu Lys Gly Thr Gly Lys Thr Leu Ser Leu Cys His Val Phe His Phe
      130          135          140
Cys Ala Lys Gln Asp Trp Leu Ile Leu His Ile Pro Asp Ala His Leu
145          150          155          160
Trp Val Lys Asn Cys Arg Asp Leu Leu Gln Ser Ser Tyr Asn Lys Gln
      165          170          175
Arg Phe Asp Gln Pro Leu Glu Ala Ser Thr Trp Leu Lys Asn Phe Lys
      180          185          190
Thr Thr Asn Glu Arg Phe Leu Asn Gln Ile Lys Val Gln Glu Lys Tyr
      195          200          205
Val Trp Asn Lys Arg Glu Leu Thr Glu Lys Gly Ser Pro Leu Gly Glu
      210          215          220
Val Val Glu Gln Gly Ile Thr Arg Val Arg Asn Ala Thr Asp Ala Val
225          230          235          240
Gly Ile Val Leu Lys Glu Leu Lys Arg Gln Ser Ser Leu Gly Met Phe
      245          250          255
His Leu Leu Val Ala Val Asp Gly Ile Asn Ala Leu Trp Gly Arg Thr
      260          265          270
Thr Leu Lys Arg Glu Asp Lys Ser Pro Ile Ala Pro Glu Glu Leu Ala
      275          280          285
Leu Val His Asn Leu Arg Lys Met Met Lys Asn Asp Trp His Gly Gly
      290          295          300
Ala Ile Val Ser Ala Leu Ser Gln Thr Gly Ser Leu Phe Lys Pro Arg
305          310          315          320
Lys Ala Tyr Leu Pro Gln Glu Leu Leu Gly Lys Glu Gly Phe Asp Ala
      325          330          335
Leu Asp Pro Phe Ile Pro Ile Leu Val Ser Asn Tyr Asn Pro Lys Glu
      340          345          350
Phe Glu Ser Cys Ile Gln Tyr Tyr Leu Glu Asn Asn Trp Leu Gln His
      355          360          365
Glu Lys Ala Pro Thr Glu Glu Gly Lys Lys Glu Leu Leu Phe Leu Ser
      370          375          380
Asn Ala Asn Pro Ser Leu Leu Glu Arg His Cys Ala Tyr Leu
385          390          395

```

&lt;210&gt; 4179

&lt;211&gt; 2208

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4179

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<210> 4180

<211> 257

<212> PRT

<213> Homo sapiens

<400> 4180

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			20					25					30		
Thr	Asp	Cys	Val	Met	Ile	Ser	Thr	Arg	Leu	Val	Ser	Ser	Val	His	Ala
		35					40					45			
Val	Leu	Ala	Thr	Gly	Ser	Gly	Ile	Val	Ile	Ile	Arg	Ser	Cys	Asp	Asp
	50					55					60				
Val	Ile	Thr	Gly	Arg	His	Trp	Leu	Ala	Arg	Glu	Tyr	Val	Trp	Phe	Leu
65					70					75				80	
Ile	Pro	Tyr	Met	Ile	Tyr	Asp	Ser	Tyr	Ala	Met	Tyr	Leu	Cys	Glu	Trp
			85						90					95	
Cys	Arg	Thr	Arg	Asp	Gln	Asn	Arg	Ala	Pro	Ser	Leu	Thr	Leu	Arg	Asn
			100					105					110		
Phe	Leu	Ser	Arg	Asn	Arg	Leu	Met	Ile	Thr	His	His	Ala	Val	Ile	Leu
		115					120					125			
Phe	Val	Leu	Val	Pro	Val	Ala	Gln	Arg	Leu	Arg	Gly	Asp	Leu	Gly	Asp
	130					135					140				
Phe	Phe	Val	Gly	Cys	Ile	Phe	Thr	Ala	Glu	Leu	Ser	Thr	Pro	Phe	Val
145					150					155				160	
Ser	Leu	Gly	Arg	Val	Leu	Ile	Gln	Leu	Lys	Gln	Gln	His	Thr	Leu	Leu
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Tyr	Lys	Val	Asn	Gly	Ile	Leu	Thr	Leu	Ala	Thr	Phe	Leu	Ser	Cys	Arg

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<400> 4182
His Pro Ala Gly Ile Glu Phe Ser Leu Cys Leu Leu Phe Ala Lys Leu
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Val Ser Tyr Thr Phe Leu Tyr Trp Leu Pro Leu Tyr Ile Ala Asn Val

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Ala	His	Phe	Ser	Ala	Lys	Glu	Ala	Gly	Asp	Leu	Ser	Thr	Leu	Phe	Asp
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Val	Gly	Gly	Ile	Ile	Gly	Gly	Ile	Val	Ala	Gly	Leu	Val	Ser	Asp	Tyr
	50					55					60				
Thr	Asn	Gly	Arg	Ala	Thr	Thr	Cys	Cys	Val	Met	Leu	Ile	Leu	Ala	Ala
65					70					75				80	
Pro	Met	Met	Phe	Leu	Tyr	Asn	Tyr	Ile	Gly	Gln	Asp	Gly	Ile	Ala	Ser
			85						90					95	
Ser	Ile	Val	Met	Leu	Ile	Ile	Cys	Gly	Gly	Leu	Val	Asn	Gly	Pro	Tyr
		100						105					110		
Ala	Xaa	Ile	Thr	Thr	Ala	Val	Ser	Ala	Asp	Leu	Gly	Thr	His	Lys	Ser
	115							120				125			
Leu	Lys	Gly	Asn	Ala	Lys	Ala	Leu	Ser	Thr	Val	Thr	Ala	Ile	Ile	Asp
	130					135					140				
Gly	Thr	Gly	Ser	Ile	Gly	Ala	Ala	Leu	Gly	Pro	Leu	Leu	Ala	Gly	Leu
145					150					155				160	
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				165					170					175	
Asp	Val	Leu	Ala	Cys	Leu	Leu	Leu	Cys	Arg	Leu	Val	Tyr	Lys	Glu	Ile
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&lt;210&gt; 4183

&lt;211&gt; 1129

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4183

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780

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<210> 4184

<211> 374

<212> PRT

<213> Homo sapiens

<400> 4184

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			20					25						30	
Arg	Phe	Met	Pro	Gln	Gln	Asn	Ser	Pro	Val	Pro	Ser	Pro	Tyr	Ala	Pro
		35					40					45			
Gln	Ser	Pro	Ala	Gly	Tyr	Met	Pro	Tyr	Ser	His	Pro	Ser	Ser	Tyr	Thr
		50				55					60				
Thr	His	Pro	Gln	Met	Gln	Gln	Ala	Ser	Val	Ser	Ser	Pro	Ile	Val	Ala
65				70					75					80	
Gly	Gly	Leu	Arg	Asn	Ile	His	Asp	Asn	Lys	Val	Ser	Gly	Pro	Leu	Ser
			85					90						95	
Gly	Asn	Ser	Ala	Asn	His	His	Ala	Asp	Asn	Pro	Arg	His	Gly	Ser	Ser
			100					105					110		
Glu	Asp	Tyr	Leu	His	Met	Val	His	Arg	Leu	Ser	Ser	Asp	Asp	Gly	Asp
		115					120					125			
Ser	Ser	Thr	Met	Arg	Asn	Ala	Ala	Ser	Phe	Pro	Leu	Arg	Ser	Pro	Gln
		130				135					140				
Pro	Val	Cys	Ser	Pro	Ala	Gly	Ser	Glu	Gly	Thr	Pro	Lys	Gly	Ser	Arg
145					150				155					160	
Pro	Pro	Leu	Ile	Leu	Gln	Ser	Gln	Ser	Leu	Pro	Cys	Ser	Ser	Pro	Arg
			165					170						175	
Asp	Val	Pro	Pro	Asp	Ile	Leu	Leu	Asp	Ser	Pro	Glu	Arg	Lys	Gln	Lys
		180						185					190		
Lys	Gln	Lys	Lys	Met	Lys	Leu	Gly	Lys	Asp	Glu	Lys	Glu	Gln	Ser	Glu
		195					200					205			
Lys	Ala	Ala	Met	Tyr	Asp	Ile	Ile	Ser	Ser	Pro	Ser	Lys	Asp	Ser	Thr
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Lys	Leu	Thr	Leu	Arg	Leu	Ser	Arg	Val	Arg	Ser	Ser	Asp	Met	Asp	Gln
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Gln	Glu	Asp	Met	Leu	Ser	Gly	Met	Glu	Asn	Ser	Asn	Val	Ser	Glu	Asn
			245					250						255	
Asp	Ile	Pro	Phe	Asn	Val	Gln	Tyr	Gln	Gly	Gln	Thr	Ser	Lys	Thr	Pro
		260						265					270		
Ile	Thr	Pro	Gln	Asp	Val	Asn	Arg	Pro	Leu	Asn	Ala	Ala	Gln	Cys	Leu

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Ser Gln Gln Glu Gln Thr	Ala Phe Leu Pro Ala	Asn Gln Val Pro Val
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Leu Gln Gln Asn Thr Ser	Val Ala Thr Lys Gln	Pro Gln Thr Ser Val
305	310	315
Val Gln Asn Gln Gln Gln	Ile Ser Gln Gln Gly	Pro Ile Tyr Asp Glu
325	330	335
Val Glu Leu Asp Ala Leu	Ala Glu Ile Glu Arg	Ile Glu Arg Glu Ser
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Ala Ile Glu Arg Glu Arg	Phe Ser Lys Glu Val	Gln Asp Lys Asp Lys
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Pro Leu Lys Lys Lys Lys		
370		

&lt;210&gt; 4185

&lt;211&gt; 1481

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4185

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1020

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&lt;210&gt; 4186

&lt;211&gt; 385

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4186

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 Gln Gln Ala Glu Lys Ile Leu Lys Ser Met Asp Lys Asn Gly Thr Met  
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 Thr Ile Asp Trp Asn Glu Trp Arg Asp Tyr His Leu Leu His Pro Val  
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 Glu Asn Ile Pro Glu Ile Ile Leu Tyr Trp Lys His Ser Thr Ile Phe  
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 Asp Val Gly Glu Asn Leu Thr Val Pro Asp Glu Phe Thr Val Glu Glu  
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 Arg Gln Thr Gly Met Trp Trp Arg His Leu Val Ala Gly Gly Gly Ala  
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 Gly Ala Val Ser Arg Thr Cys Thr Ala Pro Leu Asp Arg Leu Lys Val  
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 130 135 140  
 Gly Phe Thr Gln Met Ile Arg Glu Gly Gly Ala Arg Ser Leu Trp Arg  
 145 150 155 160  
 Gly Asn Gly Ile Asn Val Leu Lys Ile Ala Pro Glu Ser Ala Ile Lys  
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 Phe Met Ala Tyr Glu Gln Ile Lys Arg Leu Val Gly Ser Asp Gln Glu  
 180 185 190  
 Thr Leu Arg Ile His Glu Arg Leu Val Ala Gly Ser Leu Ala Gly Ala  
 195 200 205  
 Ile Ala Gln Ser Ser Ile Tyr Pro Met Glu Val Leu Lys Thr Arg Met  
 210 215 220  
 Ala Leu Arg Lys Thr Gly Gln Tyr Ser Gly Met Leu Asp Cys Ala Arg  
 225 230 235 240  
 Arg Ile Leu Ala Arg Glu Gly Val Ala Ala Phe Tyr Lys Gly Tyr Val

245 250 255  
 Pro Asn Met Leu Gly Ile Ile Pro Tyr Ala Gly Ile Asp Leu Ala Val  
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 Tyr Glu Thr Leu Lys Asn Ala Trp Leu Gln His Tyr Ala Val Asn Ser  
 275 280 285  
 Ala Asp Pro Gly Val Phe Val Leu Leu Ala Cys Gly Thr Met Ser Ser  
 290 295 300  
 Thr Cys Gly Gln Leu Ala Ser Tyr Pro Leu Ala Leu Val Arg Thr Arg  
 305 310 315 320  
 Met Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser  
 325 330 335  
 Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu Tyr  
 340 345 350  
 Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val Ser Ile  
 355 360 365  
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 Arg  
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&lt;210&gt; 4187

&lt;211&gt; 1087

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4187

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<210> 4188

<211> 272

<212> PRT

<213> Homo sapiens

<400> 4188

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Tyr	Asn	Tyr	Gly	Ser	Phe	Glu	Asn	Val	Ser	Gly	Ser	Thr	Asp	Gly	Leu
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Val	Asp	Ser	Ala	Gly	Thr	Gly	Asp	Leu	Ser	Tyr	Gly	Tyr	Gln	Gly	Arg
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Ser	Phe	Glu	Pro	Val	Gly	Thr	Arg	Pro	Arg	Val	Asp	Ser	Met	Ser	Ser
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Val	Glu	Glu	Asp	Asp	Tyr	Asp	Thr	Leu	Thr	Asp	Ile	Asp	Ser	Asp	Lys
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Asn	Val	Ile	Arg	Thr	Lys	Gln	Tyr	Leu	Tyr	Val	Ala	Asp	Leu	Ala	Arg
		100						105					110		
Lys	Asp	Lys	Arg	Val	Leu	Arg	Lys	Lys	Tyr	Gln	Ile	Tyr	Phe	Trp	Asn
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Ile	Ala	Thr	Ile	Ala	Val	Phe	Tyr	Ala	Leu	Pro	Val	Val	Gln	Leu	Val
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Ile	Thr	Tyr	Pro	Glu	Xaa	Gly	Gly	Cys	Thr	Arg	Gly	Ser	Arg	Asp	Ile
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Cys	Ser	Ser	Asn	Phe	Leu	Cys	Ala	His	Pro	Leu	Gly	Asn	Leu	Ser	Ala
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Phe	Asn	Asn	Ile	Leu	Ser	Asn	Leu	Gly	Tyr	Ile	Leu	Leu	Gly	Leu	Leu
		180						185					190		
Phe	Leu	Leu	Ile	Ile	Leu	Gln	Arg	Glu	Ile	Asn	His	Asn	Arg	Ala	Leu
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Leu	Arg	Asn	Asp	Leu	Cys	Ala	Leu	Glu	Cys	Gly	Ile	Pro	Lys	His	Phe
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Gly	Leu	Phe	Tyr	Ala	Met	Gly	Thr	Ala	Leu	Met	Met	Glu	Gly	Leu	Leu
225					230					235					240
Ser	Ala	Cys	Tyr	His	Val	Cys	Pro	Asn	Tyr	Thr	Asn	Phe	Gln	Phe	Gly
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<210> 4189

<211> 1570

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4189

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240  
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1380  
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1440  
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<210> 4190  
 <211> 523  
 <212> PRT  
 <213> Homo sapiens

<400> 4190  
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 35 40 45  
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 50 55 60  
 Lys Asp Glu Ala Gly Glu Asn Tyr Ser Lys Asp Gln Gly Gly Arg Thr  
 65 70 75 80  
 Leu Cys Gly Val Met Arg Ile Gly Leu Val Ala Lys Gly Leu Leu Ile  
 85 90 95  
 Lys Asp Asp Met Asp Leu Glu Leu Val Leu Met Cys Lys Asp Lys Pro  
 100 105 110  
 Thr Glu Thr Leu Leu Asn Thr Val Lys Asp Asn Leu Pro Ile Gln Ile  
 115 120 125  
 Gln Lys Leu Thr Glu Glu Lys Tyr Gln Val Glu Gln Cys Val Asn Glu  
 130 135 140  
 Ala Ser Ile Ile Ile Arg Asn Thr Lys Glu Pro Thr Leu Thr Leu Lys  
 145 150 155 160  
 Val Ile Leu Thr Ser Pro Leu Ile Arg Asp Glu Leu Glu Lys Lys Asp  
 165 170 175  
 Gly Glu Asn Val Ser Met Lys Asp Pro Pro Asp Leu Leu Asp Arg Gln  
 180 185 190  
 Lys Cys Leu Asn Ala Leu Ala Ser Leu Arg His Ala Lys Trp Phe Gln  
 195 200 205  
 Ala Arg Ala Asn Gly Leu Lys Ser Cys Val Ile Val Leu Arg Ile Leu  
 210 215 220  
 Arg Asp Leu Cys Asn Arg Val Pro Thr Trp Ala Pro Leu Lys Gly Trp  
 225 230 235 240  
 Pro Leu Glu Leu Ile Cys Glu Lys Ser Ile Gly Thr Cys Asn Arg Pro  
 245 250 255  
 Leu Gly Ala Gly Glu Ala Leu Arg Arg Val Met Glu Cys Leu Ala Ser  
 260 265 270  
 Gly Ile Leu Leu Pro Gly Gly Pro Gly Leu His Asp Pro Cys Glu Arg  
 275 280 285  
 Asp Pro Thr Asp Ala Leu Ser Tyr Met Thr Ile Gln Gln Lys Glu Asp  
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 Ile Thr His Ser Ala Gln His Ala Leu Arg Leu Ser Ala Phe Gly Gln  
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 Gln Lys Tyr Ser Trp Ser Val Thr Asp Lys Glu Gly Ala Gly Ser Ser



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Phe	Thr	Met	Ser	Val	Asp	Val	Asp	Gly	Thr	Thr	Tyr	Glu	Ala	Ser	Gly
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Pro	Ser	Lys	Lys	Thr	Ala	Lys	Leu	His	Val	Ala	Val	Lys	Val	Leu	Gln
	435						440					445			
Ala	Met	Gly	Tyr	Pro	Thr	Gly	Phe	Asp	Ala	Asp	Ile	Glu	Cys	Met	Ser
	450					455				460					
Ser	Asp	Glu	Lys	Arg	Arg	Gly	Leu	Lys	Tyr	Glu	Leu	Ile	Ser	Glu	Thr
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Gly	Gly	Ser	His	Asp	Lys	Arg	Phe	Val	Met	Glu	Val	Glu	Val	Asp	Gly
			485						490					495	
Gln	Lys	Phe	Arg	Gly	Ala	Gly	Pro	Asn	Lys	Lys	Val	Ala	Lys	Ala	Ser
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Ala	Ala	Leu	Leu	Ala	Xaa	Gly	Glu	Thr	Val	Phe					
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&lt;210&gt; 4191

&lt;211&gt; 1661

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4191

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 480  
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 1661

&lt;210&gt; 4192

&lt;211&gt; 517

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4192

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 35 40 45  
 Ala Ser Ile Ala Thr Ala Ser Ala Ser Ala Gln Ala Arg Asn His Val  
 50 55 60  
 Asp Ala Gln Val Gln Thr Glu Ala Pro Val Pro Val Ser Val Gln Pro  
 65 70 75 80  
 Pro Ser Gln Tyr Asp Ile Pro Arg Leu Ala Ala Phe Leu Arg Arg Val  
 85 90 95  
 Glu Ala Met Val Ile Arg Glu Leu Asn Lys Asn Trp Gln Ser His Ala  
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<211> 6439
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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4193

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 <213> Homo sapiens

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 Glu Glu Asn Gly Arg Ala Cys Glu Met Asn Gly Glu Glu Cys Ala Glu  
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 Arg Asp Gln Gly Ser Ser Ala Leu Ser Gly Val Gly Gly Ile Arg Leu  
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 Pro Asn Gly Lys Leu Lys Cys Asp Ile Cys Gly Ile Ile Cys Ile Gly  
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 Pro Asn Val Leu Met Val His Lys Arg Ser His Thr Gly Glu Arg Pro  
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 245 250 255  
 Gly Ser Glu Arg Ser Leu Val Leu Asp Arg Leu Ala Ser Asn Val Ala  
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 325 330 335  
 Gly Ser Glu Val Val Pro Val Ile Ser Pro Met Tyr Gln Leu His Lys



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 Glu Ser Asn Asn Glu Glu Gln Arg Ser Gly Leu Ile Tyr Leu Thr Asn  
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 His Ile Ala Pro His Ala Arg Asn Gly Leu Ser Leu Lys Glu Glu His  
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 465 470 475 480  
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 Tyr His Ser Gln Asp Arg Tyr Glu Phe Ser Ser His Ile Thr Arg Gly  
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&lt;210&gt; 4195

&lt;211&gt; 1200

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4195

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&lt;210&gt; 4196

&lt;211&gt; 318

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4196

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Pro	Pro	Thr	Leu	Ala	Ser	Leu	Gln	Arg	Leu	Leu	Trp	Val	Arg	Gln	Ala
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<211> 186

<212> PRT

<213> Homo sapiens

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Lys	Thr	Thr	Phe	Val	Asn	Val	Ile	Ala	Ser	Gly	Gln	Phe	Ser	Glu	Asp
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Met	Trp	Glu	Arg	Tyr	Cys	Arg	Gly	Val	Asn	Ala	Ile	Val	Tyr	Met	Ile
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Asp	Ala	Ala	Asp	Arg	Glu	Lys	Ile	Glu	Ala	Ser	Arg	Asn	Glu	Leu	His
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Asn	Leu	Leu	Asp	Lys	Pro	Gln	Leu	Gln	Gly	Ile	Pro	Val	Leu	Val	Leu
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 <211> 243  
 <212> PRT  
 <213> Homo sapiens

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 Gln Pro Val Gly Gly Gly Gly Ser Pro Ser Asp Phe Tyr Leu Cys Ser  
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 Leu Leu Ala Ser Gly Xaa Ala Ala Leu Ala Cys Val Phe Leu Gly Val

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          100          105          110
Asn Glu Ala Ala Ile Thr Thr Phe Ser Val Leu Gly Leu Phe Ser Ser
          115          120          125
Gln Ala Ala Ala Ile Leu Ser Thr Leu Leu Ala Ala Glu Val Ile Pro
          130          135          140
Thr Thr Val Arg Gly Arg Gly Leu Gly Leu Ile Met Ala Leu Gly Ala
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Leu Gly Gly Leu Ser Gly Pro Ala Gln Arg Leu His Met Gly His Gly
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Ala Phe Leu Gln His Val Val Leu Ala Ala Cys Ala Leu Leu Cys Ile
          180          185          190
Leu Ser Ile Met Leu Leu Pro Glu Thr Lys Arg Lys Leu Leu Pro Glu
          195          200          205
Val Leu Arg Asp Gly Glu Leu Cys Arg Arg Pro Ser Leu Leu Arg Gln
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Pro Thr Pro Thr Arg Cys Asp His Val Pro Leu Leu Ala Thr Pro Asn
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&lt;210&gt; 4203

&lt;211&gt; 1368

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4203

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<213> Homo sapiens

<400> 4204

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Phe	Tyr	Ser	Ser	Trp	Tyr	Tyr	Cys	Leu	His	Ile	Leu	Gly	Ile	Leu	Val
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<211> 6523

<212> DNA

<213> Homo sapiens

<400> 4205

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&lt;210&gt; 4206

&lt;211&gt; 829

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4206

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180	185	190	
Lys Cys Pro Thr Pro Gly Cys Thr Gly Gln Gly His Val Asn Ser Asn			
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Leu Ser Lys Asp Ile Lys Lys Glu Leu Leu Thr Cys Pro Thr Pro Gly
      500              505              510
Cys Asp Gly Ser Gly His Ile Thr Gly Asn Tyr Ala Ser His Arg Ser
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Leu Ser Gly Cys Pro Leu Ala Asp Lys Ser Leu Arg Asn Leu Met Ala
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Ala His Ser Ala Asp Leu Lys Cys Pro Thr Pro Gly Cys Asp Gly Ser
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Gly His Ile Thr Gly Asn Tyr Ala Ser His Arg Ser Leu Ser Gly Cys
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Lys Glu Asp Pro Glu Leu Met Lys Cys Pro Val Pro Gly Cys Val Gly
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Leu Gly His Ile Ser Gly Lys Tyr Ala Ser His Arg Ser Ala Ser Gly
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705              710              715              720
Asp Leu Asn Glu Ser Asn Ser Glu Met Glu Ala Ala Met Val Gln Leu
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Gln Ser Gln Ile Ser Ser Met Glu Lys Asn Leu Lys Asn Ile Glu Glu
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Glu Asn Lys Leu Ile Glu Glu Gln Asn Glu Ala Leu Phe Leu Glu Leu
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Ser Gly Leu Ser Gln Ala Leu Ile Gln Ser Leu Ala Asn Ile Arg Leu
      770              775              780
Pro His Met Glu Pro Ile Cys Glu Gln Asn Phe Asp Ala Tyr Val Ser
785              790              795              800
Thr Leu Thr Asp Met Tyr Ser Asn Gln Asp Pro Glu Asn Lys Asp Leu
      805              810              815
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&lt;210&gt; 4207

&lt;211&gt; 1016

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4207

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&lt;210&gt; 4208

&lt;211&gt; 193

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4208

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<210> 4210  
 <211> 863  
 <212> PRT  
 <213> Homo sapiens

<400> 4210  
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 Ser Arg Pro Glu Arg Pro Asp Leu Val Phe Glu Glu Glu Asp Leu Pro  
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 Tyr Glu Glu Glu Ile Met Arg Asn Gln Phe Ser Val Lys Cys Trp Leu  
 35 40 45  
 Arg Tyr Ile Glu Phe Lys Gln Gly Ala Pro Lys Pro Arg Leu Asn Gln  
 50 55 60  
 Leu Tyr Glu Arg Ala Leu Lys Leu Leu Pro Cys Ser Tyr Lys Leu Trp  
 65 70 75 80  
 Tyr Arg Tyr Leu Lys Ala Arg Arg Ala Gln Val Lys His Arg Cys Val  
 85 90 95  
 Thr Asp Pro Ala Tyr Glu Asp Val Asn Asn Cys His Glu Arg Ala Phe  
 100 105 110  
 Val Phe Met His Lys Met Pro Arg Leu Trp Leu Asp Tyr Cys Gln Phe  
 115 120 125  
 Leu Met Asp Gln Gly Arg Val Thr His Thr Arg Arg Thr Phe Asp Arg  
 130 135 140  
 Ala Leu Arg Ala Leu Pro Ile Thr Gln His Ser Arg Ile Trp Pro Leu  
 145 150 155 160  
 Tyr Leu Arg Phe Leu Arg Ser His Pro Leu Pro Glu Thr Ala Val Arg  
 165 170 175  
 Gly Tyr Arg Arg Phe Leu Lys Leu Ser Pro Glu Ser Ala Glu Glu Tyr  
 180 185 190  
 Ile Glu Tyr Leu Lys Ser Ser Asp Arg Leu Asp Glu Ala Ala Gln Arg  
 195 200 205  
 Leu Ala Thr Val Val Asn Asp Glu Arg Phe Val Ser Lys Ala Gly Lys  
 210 215 220  
 Ser Asn Tyr Gln Leu Trp His Glu Leu Cys Asp Leu Ile Ser Gln Asn  
 225 230 235 240  
 Pro Asp Lys Val Gln Ser Leu Asn Val Asp Ala Ile Ile Arg Gly Gly  
 245 250 255  
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 260 265 270  
 Asp Tyr Tyr Ile Arg Ser Gly His Phe Glu Lys Ala Arg Asp Val Tyr  
 275 280 285  
 Glu Glu Ala Ile Arg Thr Val Met Thr Val Arg Asp Phe Thr Gln Val  
 290 295 300  
 Phe Asp Ser Tyr Ala Gln Phe Glu Glu Ser Met Ile Ala Ala Lys Met  
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 Glu Thr Ala Ser Glu Leu Gly Arg Glu Glu Glu Asp Asp Val Asp Leu  
 325 330 335  
 Glu Leu Arg Leu Ala Arg Phe Glu His Leu Ile Ser Arg Arg Pro Leu

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          340          345          350
His Leu Ser Ser Val Leu Leu Arg Gln Asn Pro His His Val His Glu
          355          360          365
Trp His Lys Arg Val Ala Leu His Gln Gly Arg Pro Arg Glu Ile Ile
          370          375          380
Asn Thr Tyr Thr Glu Ala Val Gln Thr Val Asp Pro Phe Lys Ala Thr
385          390          395          400
Gly Lys Pro His Thr Leu Trp Val Ala Phe Ala Lys Phe Tyr Glu Asp
          405          410          415
Asn Gly Gln Leu Asp Asp Ala Arg Val Ile Leu Glu Lys Ala Thr Lys
          420          425          430
Val Asn Phe Lys Gln Val Asp Asp Leu Ala Ser Val Trp Cys Gln Cys
          435          440          445
Gly Glu Leu Glu Leu Arg His Glu Asn Tyr Asp Glu Ala Leu Arg Leu
          450          455          460
Leu Arg Lys Ala Thr Ala Leu Pro Pro Pro Gly Arg Val Phe Asp Gly
465          470          475          480
Ser Glu Pro Val Gln Asn Arg Val Tyr Lys Ser Leu Lys Val Trp Ser
          485          490          495
Met Leu Ala Asp Leu Glu Glu Ser Leu Gly Thr Phe Gln Ser Thr Lys
          500          505          510
Ala Val Tyr Asp Arg Ile Leu Asp Leu Arg Ile Ala Thr Pro Gln Ile
          515          520          525
Val Ile Asn Tyr Ala Met Phe Leu Glu Glu His Lys Tyr Phe Glu Glu
530          535          540
Ser Phe Lys Ala Tyr Glu Arg Gly Ile Ser Leu Phe Lys Trp Pro Asn
545          550          555          560
Val Ser Asp Ile Trp Ser Thr Tyr Leu Thr Lys Phe Ile Ala Arg Tyr
          565          570          575
Gly Gly Arg Lys Leu Glu Arg Ala Arg Asp Leu Phe Glu Gln Ala Leu
          580          585          590
Asp Gly Cys Pro Pro Lys Tyr Ala Lys Thr Leu Tyr Leu Leu Tyr Ala
          595          600          605
Gln Leu Glu Glu Glu Trp Gly Leu Ala Arg His Ala Met Ala Val Tyr
610          615          620
Glu Arg Ala Thr Arg Ala Val Glu Pro Ala Gln Gln Tyr Asp Met Phe
625          630          635          640
Asn Ile Tyr Ile Lys Arg Ala Ala Glu Ile Tyr Gly Val Thr His Thr
          645          650          655
Arg Gly Ile Tyr Gln Lys Ala Ile Glu Val Leu Ser Asp Glu His Ala
          660          665          670
Arg Glu Met Cys Leu Arg Phe Ala Asp Met Glu Cys Lys Leu Gly Glu
          675          680          685
Ile Asp Arg Ala Arg Ala Ile Tyr Ser Phe Cys Ser Gln Ile Cys Asp
690          695          700
Pro Arg Thr Thr Gly Ala Phe Trp Gln Thr Trp Lys Asp Phe Glu Val
705          710          715          720
Arg His Gly Asn Glu Asp Thr Ile Arg Glu Met Leu Arg Ile Arg Arg
          725          730          735
Ser Val Gln Ala Thr Tyr Asn Thr Gln Val Asn Phe Met Ala Ser Gln
          740          745          750
Met Leu Lys Val Ser Gly Ser Ala Thr Gly Thr Val Ser Asp Leu Ala
          755          760          765
Pro Gly Gln Ser Gly Met Asp Asp Met Lys Leu Leu Glu Gln Arg Ala

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770		775		780
Glu Gln Leu Ala Ala	Glu Ala Glu Arg Asp	Gln Pro Leu Arg Ala Gln		
785	790	795		800
Ser Lys Ile Leu Phe	Val Arg Ser Asp Ala	Ser Arg Glu Glu Leu Ala		
	805	810		815
Glu Leu Ala Gln Gln	Val Asn Pro Glu Glu	Ile Gln Leu Gly Glu Asp		
	820	825		830
Glu Asp Glu Asp Glu	Met Asp Leu Glu	Pro Asn Glu Val Arg Leu Glu		
	835	840		845
Gln Gln Ser Val Pro	Ala Ala Val Phe Gly	Ser Leu Lys Glu Asp		
850	855	860		

<210> 4211  
 <211> 456  
 <212> DNA  
 <213> Homo sapiens

<400> 4211  
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 120  
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 180  
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 240  
 gcataccatg tcgctgaaag agggaaagaa aatgaaagag cgctccttaa aaagacgtaa  
 300  
 aattacactt tcactactac tggttcctat ccttggtgcag taaagtacaa cctggccagg  
 360  
 gtttaccagc tctacctgca actgagtcag aaaggcaaag tagtcagctt tgtccatgct  
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<210> 4212  
 <211> 81  
 <212> PRT  
 <213> Homo sapiens

<400> 4212
Met Leu Lys Gln Gln Asp Leu Ser Ile Ala Met Val Val Thr Ser Arg
1 5 10 15
Glu Val Leu Ser Ala Leu Ser Gln Leu Val Pro Cys Val Gly Cys Arg
20 25 30
Arg Ser Val Glu Arg Leu Phe Ser Ser Leu Arg Val Trp Lys Ser Ala
35 40 45
Leu Asp Pro Tyr Ser Arg Pro Arg Glu Ser Val Val Thr Lys Arg Arg
50 55 60
Arg Ala Arg Ala Phe Ile Phe Ser Ser Glu Lys Leu Gly Ala Ser Asp
65 70 75 80
Pro

<210> 4213  
 <211> 383  
 <212> DNA  
 <213> Homo sapiens

<400> 4213  
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 ttcccggacc cggcccggcc gccctggtac gcctgctcgt cggccttctg ggccgcggcg  
 180  
 ctgctcacgc tgtcgtggcc gctgcgagtg ctggccgagt accgcacggc ctacgcgcac  
 240  
 taccacgtgg agaagctggt tggcctggag ggcccgggct cggccagcag cgcaggcggt  
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 acagtagaca gcacggagct cgg  
 383

<210> 4214  
 <211> 127  
 <212> PRT  
 <213> Homo sapiens

<400> 4214  
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 Leu Asp Asp Tyr Met Glu Ala Arg Glu Gly Met His Leu Lys Asn Val  
 20 25 30  
 Asp Phe Arg Glu Phe Met Val Ala Phe Pro Asp Pro Ala Arg Pro Pro  
 35 40 45  
 Trp Tyr Ala Cys Ser Ser Ala Phe Trp Ala Ala Ala Leu Leu Thr Leu  
 50 55 60  
 Ser Trp Pro Leu Arg Val Leu Ala Glu Tyr Arg Thr Ala Tyr Ala His  
 65 70 75 80  
 Tyr His Val Glu Lys Leu Phe Gly Leu Glu Gly Pro Gly Ser Ala Ser  
 85 90 95  
 Ser Ala Gly Gly Gly Leu Ser Pro Ser Asp Glu Leu Leu Pro Pro Leu  
 100 105 110  
 Thr His Arg Leu Pro Arg Val Asn Thr Val Asp Ser Thr Glu Leu  
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<210> 4215  
 <211> 939  
 <212> DNA  
 <213> Homo sapiens

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ttggccctag agagtacaaa cactgaaaag gagacaagcc tggaggaaac aaaaatcggg  
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 420  
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 480  
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&lt;210&gt; 4216

&lt;211&gt; 287

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4216

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Leu	Glu	Ser	Thr	Asn	Thr	Glu	Lys	Glu	Thr	Ser	Leu	Glu	Glu	Thr	Lys
			20					25					30		
Ile	Gly	Glu	Ile	Leu	Ile	Gln	Gly	Leu	Thr	Glu	Asp	Met	Val	Thr	Val
		35					40					45			
Leu	Ile	Arg	Ala	Cys	Val	Ser	Met	Leu	Gly	Val	Pro	Val	Asp	Pro	Asp
		50					55				60				
Thr	Leu	His	Ala	Thr	Leu	Cys	Phe	Cys	Leu	Arg	Val	Thr	Arg	Gly	Pro
65					70				75					80	
Gln	Leu	Ala	Met	Met	Phe	Ala	Glu	Leu	Lys	Asn	Thr	Arg	Met	Ile	Leu
			85					90						95	
Asn	Leu	Thr	Gln	Ser	Ser	Gly	Phe	Asn	Gly	Phe	Thr	Pro	Leu	Val	Thr
			100					105					110		
Leu	Leu	Leu	Arg	His	Ile	Ile	Glu	Asp	Pro	Cys	Thr	Leu	Arg	His	Thr
			115				120					125			
Met	Glu	Lys	Val	Val	Arg	Ser	Ala	Ala	Thr	Ser	Gly	Ala	Gly	Ser	Thr
		130					135				140				
Thr	Ser	Gly	Val	Val	Ser	Gly	Ser	Leu	Gly	Ser	Arg	Glu	Ile	Asn	Tyr

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145          150          155          160
Ile Leu Arg Val Leu Gly Pro Ala Ala Cys Arg Asn Pro Asp Ile Phe
          165          170          175
Thr Glu Val Ala Asn Cys Cys Ile Arg Ile Ala Leu Pro Ala Pro Arg
          180          185          190
Gly Ser Gly Thr Ala Ser Asp Asp Glu Phe Glu Asn Leu Arg Ile Lys
          195          200          205
Gly Pro Asn Ala Val Gln Leu Val Lys Thr Thr Pro Leu Lys Pro Ser
          210          215          220
Pro Leu Pro Val Ile Pro Asp Thr Ile Lys Glu Val Ile Tyr Asp Met
225          230          235          240
Leu Asn Ala Leu Ala Ala Tyr His Ala Pro Glu Glu Ala Asp Lys Ser
          245          250          255
Asp Pro Lys Pro Gly Val Met Thr Gln Glu Val Gly Gln Leu Leu Gln
          260          265          270Met Gly Asp Asp
Val Tyr Gln Gln Tyr Arg Ser Leu Thr Arg
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<210> 4217  
 <211> 619  
 <212> DNA  
 <213> Homo sapiens

<400> 4217  
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 120  
 acatacacac acacacacaa ccagccacag gccacaaaag gtgtctctct ctttgtccct  
 180  
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 360  
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 420  
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 480  
 ccaccctgtg ctgtgagtgg ccactcccat ccaacaactg agactttctg ttactgggccc  
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 600  
 cagtcctccc ctggcgcg  
 619

<210> 4218  
 <211> 155  
 <212> PRT  
 <213> Homo sapiens

<400> 4218  
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Gly Pro Gln Arg Cys Leu Ser Leu Cys Pro Cys Leu Leu Ser Arg Thr
      35           40           45
His Thr His Thr Ser Gln Pro Gln Ala His Gln Ser Leu Ser Val Ser
      50           55           60
Leu Ser Leu Ser Leu Ser Leu Thr His Ile His Leu Ser His Arg Pro
65           70           75           80
Thr Arg Val Ser Leu Leu Val Pro Gly Ser Ser Leu Ser His Thr Pro
      85           90           95
Thr His Thr His Thr Ala Gln Pro Gln Ala His Glu Gly Val Ser Leu
      100          105          110
Ser Leu Ser Leu Ser His Thr His Thr His Thr His Thr Pro Val Gln
      115          120          125
Leu His Arg Gly Leu Gly Gln Glu Thr Asp Leu Asn Thr His Thr Thr
      130          135          140
Leu Cys Cys Glu Trp Pro Leu Pro Ser Asn Asn
145          150          155

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&lt;210&gt; 4219

&lt;211&gt; 774

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4219

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120
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180
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240
cagcagctcc gtgggcggca ggtgccggag cctcaagacc ccgaagaaac gctccaatcc
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774

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&lt;210&gt; 4220



<211> 258  
 <212> PRT  
 <213> Homo sapiens

<400> 4220  
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 Ala Glu Ala Pro Pro Leu Gln Gln Arg Pro Arg Gln Arg Gln Gln Gln  
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 Arg Ala Glu Arg Gly Ala Pro Ala Gly His Gly Glu Asp Gly Pro Val  
 35 40 45  
 Leu Pro Gln Arg Arg Gln Gln Arg Leu Arg Glu Arg Asp Ala Gly Gln  
 50 55 60  
 Arg Gly His Arg Gln Arg Val Leu Gly Ala Gly Leu His Glu Arg Glu  
 65 70 75 80  
 Gln Gln Leu Arg Gly Arg Gln Val Pro Glu Pro Gln Asp Pro Glu Glu  
 85 90 95  
 Thr Leu Gln Ser Arg Phe Ser Glu Thr Glu Ala Tyr Pro Ser Thr Ile  
 100 105 110  
 Pro Gly His Leu Phe Pro Cys Glu Lys Thr Pro Gln Gln His Arg Arg  
 115 120 125  
 Pro Leu Gly Gly Trp Xaa Pro Leu Arg Ser Ser Pro Arg Gly Leu Gly  
 130 135 140  
 Glu Pro Leu Arg Leu Lys Ser Xaa Glu Ile Asp Asp Val Glu Arg Leu  
 145 150 155 160  
 Gln Arg Arg Arg Gly Gly Ala Ser Lys Glu Ala Met Cys Phe Asn Ala  
 165 170 175  
 Lys Leu Lys Ile Leu Glu His Arg Gln Gln Arg Ile Ala Glu Val Arg  
 180 185 190  
 Ala Lys Tyr Glu Trp Leu Met Lys Glu Leu Glu Ala Thr Lys Gln Tyr  
 195 200 205  
 Leu Met Leu Asp Pro Asn Lys Trp Leu Ser Glu Phe Asp Leu Glu Gln  
 210 215 220  
 Val Trp Glu Leu Asp Ser Leu Glu Tyr Leu Glu Ala Leu Glu Cys Val  
 225 230 235 240  
 Thr Glu Arg Leu Glu Ser Arg Val Asn Phe Cys Lys Ala His Leu Met  
 245 250 255  
 Met Leu

<210> 4221  
 <211> 789  
 <212> DNA  
 <213> Homo sapiens

<400> 4221  
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 120  
 gaagcttcaa actgtataaa tttaaagtga tttgcatatt ataaaaataa agataaacat  
 180  
 atacatattt tacactagtt atggaacagc aatgaacgtc agtcgatccc tctttcacat  
 240

ttaacagaac tgaaatctga gtgctctaaa tactgccacc tgtactgtaa ctatggctta  
 300  
 tatgtgcacg gaaaacaaaa tccctgagaa gccattcgac tttttttttt tttcttttct  
 360  
 tcaagtagcg cgctccttgg aggatcacag ttctgaggtt cagggtgtaa aacatttgct  
 420  
 ccatgtttct gtccatgctt cccccacca cccctcccc acctcttccc cagtcgtcca  
 480  
 aaaagcacc tgcaagcacg cgttgctact caagttcaca gaacacgctg gggtgagtg  
 540  
 agagggctcg ccaggtgcaa aagatgggtcc aggtgttcag atgctctctt ttctccatgg  
 600  
 aaattccaca gccacaaacg tctctgggtt ctgtgctttt caccaacatt cttcccttaa  
 660  
 aaattgggtg tcctaaagtc acagtttggg tacagtaaaa atgatggcat aaggaaaaga  
 720  
 agcactatct tttccactta atttccaag aaagtatgaa gatacttgga acaggggctg  
 780  
 atcacagtc  
 789

&lt;210&gt; 4222

&lt;211&gt; 127

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4222

Met	Ala	Tyr	Met	Cys	Thr	Glu	Asn	Lys	Ile	Pro	Glu	Lys	Pro	Phe	Asp
1				5					10					15	
Phe	Phe	Phe	Phe	Ser	Phe	Leu	Gln	Val	Ala	Arg	Ser	Leu	Glu	Asp	His
			20					25					30		
Ser	Ser	Glu	Val	Gln	Val	Val	Lys	His	Leu	Leu	His	Val	Leu	Val	His
		35					40					45			
Ala	Ser	Pro	His	His	Pro	Leu	Pro	Thr	Ser	Ser	Pro	Val	Val	Gln	Lys
	50					55					60				
Ala	Pro	Cys	Lys	His	Ala	Leu	Ser	Leu	Lys	Phe	Thr	Glu	His	Ala	Gly
65					70				75					80	
Val	Ser	Ala	Glu	Gly	Leu	Pro	Gly	Ala	Lys	Asp	Gly	Pro	Gly	Val	Gln
			85					90						95	
Met	Leu	Ser	Phe	Leu	His	Gly	Asn	Ser	Thr	Ala	Thr	Asn	Val	Thr	Gly
			100					105					110		
Phe	Cys	Ala	Phe	His	Gln	His	Ser	Ser	Leu	Lys	Asn	Trp	Cys	Ser	
		115					120					125			

&lt;210&gt; 4223

&lt;211&gt; 852

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4223

atcctggacc agggctacta ctcgagcgga gacacaagca acgtggtacg gcaagtcctg  
 60  
 gaggccgtgg cctatttgca ctcaactcaag atcgtgcaca ggaatctcaa gctggagaac  
 120

ctggtttact acaaccggct gaagaactcg aagattgtca tcagtgactt ccatctggct  
 180  
 aagctagaaa atggcctcat caaggagccc tgtgggaccc ccgaagattt tgcccccaa  
 240  
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 300  
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 360  
 aaccatgata agaattctctt ccgcaagatc ctggctgggtg actatgagtt tgactctcca  
 420  
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 480  
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 540  
 gcttctgata agaacatcaa ggatggtgtc tgtgccaga ttgaaaagaa ctttgccagg  
 600  
 gccaaagtga agaaggctgt ccgagtgacc accctcatga aacggctccg ggcaccagag  
 660  
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 720  
 gcagaccgta gtgccacccc agccacagat ggaagtgcc cccagccac tgatggcagt  
 780  
 gtcaccccag ccaccgatgg aagcatcact ccagccattg atgggagtgt caccacagcc  
 840  
 actgacagga gc  
 852

&lt;210&gt; 4224

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4224

Ile	Leu	Asp	Gln	Gly	Tyr	Tyr	Ser	Glu	Arg	Asp	Thr	Ser	Asn	Val	Val
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Arg	Gln	Val	Leu	Glu	Ala	Val	Ala	Tyr	Leu	His	Ser	Leu	Lys	Ile	Val
		20						25					30		
His	Arg	Asn	Leu	Lys	Leu	Glu	Asn	Leu	Val	Tyr	Tyr	Asn	Arg	Leu	Lys
		35					40					45			
Asn	Ser	Lys	Ile	Val	Ile	Ser	Asp	Phe	His	Leu	Ala	Lys	Leu	Glu	Asn
		50				55					60				
Gly	Leu	Ile	Lys	Glu	Pro	Cys	Gly	Thr	Pro	Glu	Asp	Phe	Ala	Pro	Gln
65					70					75				80	
Gly	Glu	Gly	Arg	Gln	Arg	Tyr	Gly	Arg	Pro	Val	Asp	Cys	Trp	Ala	Ile
			85					90						95	
Gly	Val	Ile	Met	Tyr	Ile	Leu	Leu	Ser	Gly	Asn	Pro	Pro	Phe	Tyr	Glu
			100					105					110		
Glu	Val	Glu	Glu	Asp	Asp	Tyr	Glu	Asn	His	Asp	Lys	Asn	Leu	Phe	Arg
		115				120						125			
Lys	Ile	Leu	Ala	Gly	Asp	Tyr	Glu	Phe	Asp	Ser	Pro	Tyr	Trp	Asp	Asp
		130				135					140				
Ile	Ser	Gln	Ala	Ala	Lys	Asp	Leu	Val	Thr	Arg	Leu	Met	Glu	Val	Glu
145					150					155				160	
Gln	Asp	Gln	Arg	Ile	Thr	Ala	Glu	Glu	Ala	Ile	Ser	His	Glu	Trp	Ile

Ser Gly Asn Ala Ala Ser Asp Lys Asn Ile Lys Asp Gly Val Cys Ala  
 165 170 175  
 180 185 190  
 Gln Ile Glu Lys Asn Phe Ala Arg Ala Lys Trp Lys Lys Ala Val Arg  
 195 200 205  
 Val Thr Thr Leu Met Lys Arg Leu Arg Ala Pro Glu Gln Ser Ser Thr  
 210 215 220  
 Ala Ala Ala Gln Ser Ala Ser Ala Thr Asp Thr Ala Thr Pro Gly Ala  
 225 230 235 240  
 Ala Asp Arg Ser Ala Thr Pro Ala Thr Asp Gly Ser Ala Thr Pro Ala  
 245 250 255  
 Thr Asp Gly Ser Val Thr Pro Ala Thr Asp Gly Ser Ile Thr Pro Ala  
 260 265 270  
 Ile Asp Gly Ser Val Thr Pro Ala Thr Asp Arg Ser  
 275 280

&lt;210&gt; 4225

&lt;211&gt; 470

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4225

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 acgccaacct tccctgaaat atcctatgat gtgtatgttt atacagacat gagacctggg  
 120  
 gacagggtcc tacagttaac tgcagtcgac gcagacgaag ggtcaaatgg ggagatcaca  
 180  
 tatgaaatcc ttgttggggc tcaggggagac ttcacatca ataaaacaac agggcttattc  
 240  
 accatcgctc caggggtgga aatgatagtc gggcggactt acgcactccc ggtccaagca  
 300  
 gcggataatg ctctctctgc aaagcaaagg actcccatct gcactgtgta tattgaagt  
 360  
 cttccaccaa ataatacaag cctcctctgc ttccacagc tgatgtatag ccttgaaatt  
 420  
 agtgaagcca tgagggttgg tgctgtttta ttaaattctac aggcaactga  
 470

&lt;210&gt; 4226

&lt;211&gt; 156

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4226

Xaa Val Gln Glu Ser Glu Pro Val Ile Val Asn Ile Gln Val Met Asp  
 1 5 10 15  
 Ala Asn Asp Asn Thr Pro Thr Phe Pro Glu Ile Ser Tyr Asp Val Tyr  
 20 25 30  
 Val Tyr Thr Asp Met Arg Pro Gly Asp Arg Val Leu Gln Leu Thr Ala  
 35 40 45  
 Val Asp Ala Asp Glu Gly Ser Asn Gly Glu Ile Thr Tyr Glu Ile Leu  
 50 55 60  
 Val Gly Ala Gln Gly Asp Phe Ile Ile Asn Lys Thr Thr Gly Leu Ile

65		70		75		80									
Thr	Ile	Ala	Pro	Gly	Val	Glu	Met	Ile	Val	Gly	Arg	Thr	Tyr	Ala	Leu
				85					90					95	
Pro	Val	Gln	Ala	Ala	Asp	Asn	Ala	Pro	Pro	Ala	Lys	Gln	Arg	Thr	Pro
			100					105					110		
Ile	Cys	Thr	Val	Tyr	Ile	Glu	Val	Leu	Pro	Pro	Asn	Asn	Gln	Ser	Pro
		115				120					125				
Pro	Arg	Phe	Pro	Gln	Leu	Met	Tyr	Ser	Leu	Glu	Ile	Ser	Glu	Ala	Met
	130				135					140					
Arg	Val	Gly	Ala	Val	Leu	Leu	Asn	Leu	Gln	Ala	Thr				
145				150						155					

&lt;210&gt; 4227

&lt;211&gt; 1199

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4227

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120
cattcaaattg catcacaatc actttgtgaa attgttcgcc tgagcagaga ccagatgtta
180
caaattcaga acagtacaga gcccgacccc ctgcttgcca ctctagaaaa gcaagaaatt
240
atagagcagc ttctatcaaa tattttccac aaggagaaaa atgagtcagc catagtcagt
300
gcaatccaga tattgctgac tttacttgag acacgacgac caacatttga aggccatata
360
gagatctgcc caccaggcat gagccattca gcttggtcag taaacaagag tgttctagaa
420
gccatcagag gaagacttgg atcttttcat gaactcctgc tggagccacc caagaaaagt
480
gtgatgaaga ccacatgggg tgtgctggat cctcctgtgg ggaatacccg gttgaatgtc
540
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600
gagctgaata gcattggagt catattgaac atgttcttca agtatacatg gaataacttt
660
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720
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780
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840
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900
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960
aagttatttg tgaaatttga attacatttt tgttgggttg caggaaggat ttaagggta
1020
agtagaaatg catgtagcat ttttaatagt gatttgtggg acttctttat atttggcaaa
1080

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 1199

<210> 4228  
 <211> 298  
 <212> PRT  
 <213> Homo sapiens

<400> 4228  
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 Arg Asp Gln Met Leu Gln Ile Gln Asn Ser Thr Glu Pro Asp Pro Leu  
 20 25 30  
 Leu Ala Thr Leu Glu Lys Gln Glu Ile Ile Glu Gln Leu Leu Ser Asn  
 35 40 45  
 Ile Phe His Lys Glu Lys Asn Glu Ser Ala Ile Val Ser Ala Ile Gln  
 50 55 60  
 Ile Leu Leu Thr Leu Leu Glu Thr Arg Arg Pro Thr Phe Glu Gly His  
 65 70 75 80  
 Ile Glu Ile Cys Pro Pro Gly Met Ser His Ser Ala Cys Ser Val Asn  
 85 90 95  
 Lys Ser Val Leu Glu Ala Ile Arg Gly Arg Leu Gly Ser Phe His Glu  
 100 105 110  
 Leu Leu Leu Glu Pro Pro Lys Lys Ser Val Met Lys Thr Thr Trp Gly  
 115 120 125  
 Val Leu Asp Pro Pro Val Gly Asn Thr Arg Leu Asn Val Ile Arg Leu  
 130 135 140  
 Ile Ser Ser Leu Leu Gln Thr Asn Thr Ser Ser Ile Asn Gly Asp Leu  
 145 150 155 160  
 Met Glu Leu Asn Ser Ile Gly Val Ile Leu Asn Met Phe Phe Lys Tyr  
 165 170 175  
 Thr Trp Asn Asn Phe Leu His Thr Gln Val Glu Ile Cys Ile Ala Leu  
 180 185 190  
 Ile Leu Ala Ser Pro Phe Glu Asn Thr Glu Asn Ala Thr Ile Thr Asp  
 195 200 205  
 Gln Asp Ser Thr Gly Asp Asn Leu Leu Leu Lys His Leu Phe Gln Lys  
 210 215 220  
 Cys Gln Leu Ile Glu Arg Ile Leu Glu Ala Trp Glu Met Asn Glu Lys  
 225 230 235 240  
 Lys Gln Ala Glu Gly Gly Arg Arg His Gly Tyr Met Gly His Leu Thr  
 245 250 255  
 Arg Ile Ala Asn Cys Ile Val His Ser Thr Asp Lys Gly Pro Asn Ser  
 260 265 270  
 Ala Leu Val Gln Gln Leu Ile Lys Gly Lys Leu Phe Val Lys Phe Glu  
 275 280 285  
 Leu His Phe Cys Trp Val Ala Gly Arg Ile  
 290 295

<210> 4229  
 <211> 1612  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 4229

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120  
ggaaacatga agtcggctct cacctggaag caccggaagg agcacgccat cccccacgtg  
180  
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240  
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360  
gactacgtgg tcaagaaggg tctggggcat aactttgtgt ccggtgctgt agtcacagcc  
420  
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480  
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600  
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720  
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960  
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1080  
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1140  
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1200  
gccttggtg tggccagctc cctgctaagg aaggagacca ggaagccacc ctaacactcg  
1260  
gccagacccg ctggctccca ggccctgaga ggacagagat gaccacatcc ctgctggatg  
1320  
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1380  
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1440  
agaccagtgt gtgaggtggt aacagcgcc gcagcagggg gttggcctag acctgggatt  
1500  
tgtggggaaa gctgctggtg tgaccagctg agcaccagc caggagacct gcagccctgc  
1560

gccttccaga agcaggtccc aaataaagcc agtgcccacc tgaaaaaaaa aa  
1612

<210> 4230

<211> 417

<212> PRT

<213> Homo sapiens

<400> 4230

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Leu	Glu	Gly	Arg	Ser	Gln	Ser	Pro	Val	Ala	Leu	Leu	Phe	Asp	Ala	Leu
			20					25					30		
Leu	Arg	Pro	Asp	Thr	Asp	Phe	Gly	Gly	Asn	Met	Lys	Ser	Val	Leu	Thr
		35					40					45			
Trp	Lys	His	Arg	Lys	Glu	His	Ala	Ile	Pro	His	Val	Val	Leu	Gly	Arg
	50					55					60				
Asn	Leu	Pro	Gly	Gly	Ala	Trp	His	Ser	Ile	Glu	Gly	Ser	Met	Val	Ile
65					70					75					80
Leu	Ser	Gln	Gly	Gln	Trp	Met	Gly	Leu	Pro	Asp	Leu	Glu	Val	Lys	Asp
				85					90					95	
Trp	Met	Gln	Lys	Lys	Arg	Arg	Gly	Leu	Arg	Asn	Ser	Arg	Ala	Thr	Ala
			100					105					110		
Gly	Asp	Ile	Ala	His	Tyr	Tyr	Arg	Asp	Tyr	Val	Val	Lys	Lys	Gly	Leu
	115						120					125			
Gly	His	Asn	Phe	Val	Ser	Gly	Ala	Val	Val	Thr	Ala	Val	Glu	Trp	Gly
	130					135				140					
Thr	Pro	Asp	Pro	Ser	Ser	Cys	Gly	Ala	Gln	Asp	Ser	Ser	Pro	Leu	Phe
145					150					155					160
Gln	Val	Ser	Gly	Phe	Leu	Thr	Arg	Asn	Gln	Ala	Gln	Gln	Pro	Phe	Ser
				165					170					175	
Leu	Trp	Ala	Arg	Asn	Val	Val	Leu	Ala	Thr	Gly	Thr	Phe	Asp	Ser	Pro
		180					185					190			
Ala	Arg	Leu	Gly	Ile	Pro	Gly	Glu	Ala	Leu	Pro	Phe	Ile	His	His	Glu
	195						200					205			
Leu	Ser	Ala	Leu	Glu	Ala	Ala	Thr	Arg	Val	Gly	Ala	Val	Thr	Pro	Ala
	210					215					220				
Ser	Asp	Pro	Val	Leu	Ile	Ile	Gly	Ala	Gly	Leu	Ser	Ala	Ala	Asp	Ala
225					230					235				240	
Val	Leu	Tyr	Ala	Arg	His	Tyr	Asn	Ile	Pro	Val	Ile	His	Ala	Phe	Arg
				245					250					255	
Arg	Ala	Val	Asp	Asp	Pro	Gly	Leu	Val	Phe	Asn	Gln	Leu	Pro	Lys	Met
		260					265						270		
Leu	Tyr	Pro	Glu	Tyr	His	Lys	Val	His	Gln	Met	Met	Arg	Glu	Gln	Ser
	275						280					285			
Ile	Leu	Ser	Pro	Ser	Pro	Tyr	Glu	Gly	Tyr	Arg	Ser	Leu	Pro	Arg	His
	290					295					300				
Gln	Leu	Leu	Cys	Phe	Lys	Glu	Asp	Cys	Gln	Ala	Val	Phe	Gln	Asp	Leu
305					310					315					320
Glu	Gly	Val	Glu	Lys	Val	Phe	Gly	Val	Ser	Leu	Val	Leu	Val	Leu	Ile
				325					330					335	
Gly	Ser	His	Pro	Asp	Leu	Ser	Phe	Leu	Pro	Gly	Ala	Gly	Ala	Asp	Phe
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Ala	Val	Asp	Pro	Asp	Gln	Pro	Leu	Ser	Ala	Lys	Arg	Asn	Pro	Ile	Asp



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gagctggaaa atctcaagag caaactcgta gaagtaattg aagaagtaaa taaagttaaa
180
caagaaaaga ctgtttttaa ttcagaagtt cttgaacaga gaaaagtcct agaaaaatgc
240
aatagagtgt ccatgttagc tgtagaagag tatgaggaga tgcaagtaaa cctggagctg
300
gagaaggacc ttcgaaagaa agcagagtca tttgcccaag agatgttcct tgagccaaac
360
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420
gcttttagacg aaaatgcaaa actcaccag caacttgaag aagagagaat tcagcatcaa
480
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540
aacctcaaac agcaactgga gcttctagag gaagataaaa aggaattgga attgaaatat
600
cagaattctg aagagaaagc cagaaattta aagcactctg ttgatgaact ccagaaacga
660
gtgaaccagt ctgagaattc agtacctcca ccacctctc ctccaccacc acttccccct
720
ccacctcca atcctatccg atccctcatg tccatgatcc ggaaacgatc ccacccagtg
780
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840
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900
cccgттаатс agacagccag accgaagaca aagccagaat cttcgaaagg ctgcgaaagt
960
gcagtggtatg aactaaaagg aatactgggg acacttaaca aatccactag ttcaagaagc
1020
ttaaааатссс ttgaccctga aaacagtgaa actgagttag aaaggatttt gcgtcgcaga
1080
aaggtgacag cagaagcaga tagcagtagt ccaactggga tattagccac ctcagagtcсс
1140

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aaatccatgc cagtgttggg ttctgtatcc agtgtaacaa aaacagcctt gaacaagaaa  
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 1260  
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 1320  
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 1440  
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<210> 4232  
 <211> 434  
 <212> PRT  
 <213> Homo sapiens

<400> 4232  
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 Glu Glu Lys Lys Ile Leu Ala Ile Glu Leu Glu Asn Leu Lys Ser Lys  
 35 40 45  
 Leu Val Glu Val Ile Glu Glu Val Asn Lys Val Lys Gln Glu Lys Thr  
 50 55 60  
 Val Leu Asn Ser Glu Val Leu Glu Gln Arg Lys Val Leu Glu Lys Cys  
 65 70 75 80  
 Asn Arg Val Ser Met Leu Ala Val Glu Glu Tyr Glu Glu Met Gln Val  
 85 90 95  
 Asn Leu Glu Leu Glu Lys Asp Leu Arg Lys Lys Ala Glu Ser Phe Ala  
 100 105 110  
 Gln Glu Met Phe Leu Glu Pro Asn Gln Gly Lys Lys Thr Lys Pro Pro  
 115 120 125  
 Phe Gly Arg Gln Ser Ser Ile Leu Asp Gln Gln Leu Ala Leu Asp Glu  
 130 135 140  
 Asn Ala Lys Leu Thr Gln Gln Leu Glu Glu Glu Arg Ile Gln His Gln  
 145 150 155 160  
 Gln Lys Val Lys Glu Leu Glu Glu Gln Leu Glu Asn Glu Thr Leu His  
 165 170 175  
 Lys Glu Ile His Asn Leu Lys Gln Gln Leu Glu Leu Leu Glu Glu Asp  
 180 185 190  
 Lys Lys Glu Leu Glu Leu Lys Tyr Gln Asn Ser Glu Glu Lys Ala Arg  
 195 200 205  
 Asn Leu Lys His Ser Val Asp Glu Leu Gln Lys Arg Val Asn Gln Ser  
 210 215 220  
 Glu Asn Ser Val Pro Pro Pro Pro Pro Pro Pro Pro Leu Pro Pro  
 225 230 235 240  
 Pro Pro Pro Asn Pro Ile Arg Ser Leu Met Ser Met Ile Arg Lys Arg

245										250				255			
Ser	His	Pro	Ser	Gly	Ser	Gly	Ala	Lys	Lys	Glu	Lys	Ala	Thr	Gln	Pro		
				260					265					270			
Glu	Thr	Thr	Glu	Glu	Val	Thr	Asp	Leu	Lys	Arg	Gln	Ala	Val	Glu	Glu		
				275					280					285			
Met	Met	Asp	Arg	Ile	Lys	Lys	Gly	Val	His	Leu	Arg	Pro	Val	Asn	Gln		
				290					295					300			
Thr	Ala	Arg	Pro	Lys	Thr	Lys	Pro	Glu	Ser	Ser	Lys	Gly	Cys	Glu	Ser		
				305					310					315			
Ala	Val	Asp	Glu	Leu	Lys	Gly	Ile	Leu	Gly	Thr	Leu	Asn	Lys	Ser	Thr		
				325					330					335			
Ser	Ser	Arg	Ser	Leu	Lys	Ser	Leu	Asp	Pro	Glu	Asn	Ser	Glu	Thr	Glu		
				340					345					350			
Leu	Glu	Arg	Ile	Leu	Arg	Arg	Arg	Lys	Val	Thr	Ala	Glu	Ala	Asp	Ser		
				355					360					365			
Ser	Ser	Pro	Thr	Gly	Ile	Leu	Ala	Thr	Ser	Glu	Ser	Lys	Ser	Met	Pro		
				370					375					380			
Val	Leu	Gly	Ser	Val	Ser	Ser	Val	Thr	Lys	Thr	Ala	Leu	Asn	Lys	Lys		
				385					390					395			
Thr	Leu	Glu	Ala	Glu	Phe	Asn	Ser	Pro	Ser	Pro	Pro	Thr	Pro	Glu	Pro		
				405					410					415			
Gly	Glu	Gly	Pro	Arg	Lys	Leu	Glu	Gly	Cys	Thr	Ser	Ser	Lys	Val	Thr		
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Phe	Gln																

**<210> 4233**

<211> 2827

<212> DNA

<213> Homo sapiens

<400> 4233

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120

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180

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240

gaagaatcag aagccaaga gaaatctgga actagatgta gaagtcgttc atggattcag  
300

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360

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420

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660

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<210> 4234

<211> 833

<212> PRT

<213> Homo sapiens

<400> 4234

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			20					25					30		
Thr	Cys	Lys	Val	His	Thr	Ser	Pro	Met	Tyr	Ser	Leu	Asp	Arg	Ile	
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Phe	Ala	Gly	Phe	Arg	Thr	Arg	Ser	Gln	Met	Leu	Leu	Gly	His	Ile	Glu
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Glu	Gln	Asp	Lys	Val	Leu	His	Cys	Gln	Phe	Ser	Asp	Asn	Ser	Asp	Asp
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Glu	Glu	Ser	Glu	Gly	Gln	Glu	Lys	Ser	Gly	Thr	Arg	Cys	Arg	Ser	Arg
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Ser	Trp	Ile	Gln	Lys	Pro	Asp	Ser	Val	Cys	Ser	Leu	Val	Glu	Leu	Ser
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Asp	Thr	Gln	Asp	Glu	Thr	Gln	Lys	Ser	Asp	Leu	Glu	Asn	Glu	Asp	Leu
	115						120					125			
Lys	Ile	Asp	Cys	Leu	Gln	Glu	Ser	Gln	Glu	Leu	Asn	Leu	Gln	Lys	Leu
	130				135					140					
Lys	Asn	Ser	Glu	Arg	Ile	Leu	Thr	Glu	Ala	Lys	Gln	Lys	Met	Arg	Glu
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Leu	Thr	Val	Asn	Ile	Lys	Met	Lys	Glu	Asp	Leu	Ile	Lys	Glu	Leu	Ile
			165					170					175		
Lys	Thr	Gly	Asn	Asp	Ala	Lys	Ser	Val	Ser	Lys	Gln	Tyr	Thr	Leu	Lys
		180					185					190			
Val	Thr	Lys	Leu	Glu	His	Asp	Ala	Glu	Gln	Ala	Lys	Val	Glu	Leu	Thr
	195					200					205				
Glu	Thr	Gln	Lys	Gln	Leu	Gln	Glu	Leu	Glu	Asn	Lys	Asp	Leu	Ser	Asp

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Val Ala Met Lys Val Lys Leu Gln Lys Glu Phe Arg Lys Lys Val Asp		
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	245	250
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	260	265
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	275	280
Arg Lys Leu Arg Glu Glu Asn Glu Lys Arg Lys Gln Leu Asp Ala Val		285
	290	295
Ile Lys Arg Asp Gln Gln Lys Ile Lys Val Ile Gln Leu Lys Thr Gly		300
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Gln Glu Glu Gly Leu Lys Pro Lys Ala Glu Asp Leu Asp Ala Cys Asn		320
	325	330
Leu Lys Arg Arg Lys Gly Ser Phe Gly Ser Ile Asp His Leu Gln Lys		335
	340	345
Leu Asp Glu Gln Lys Lys Trp Leu Asp Glu Glu Val Glu Lys Val Leu		350
	355	360
Asn Gln Arg Gln Glu Leu Glu Glu Leu Glu Ala Asp Leu Lys Lys Arg		365
	370	375
Glu Ala Ile Val Ser Lys Lys Glu Ala Leu Leu Gln Glu Lys Ser His		380
385	390	395
Leu Glu Asn Lys Lys Leu Arg Ser Ser Gln Ala Leu Asn Thr Asp Ser		400
	405	410
Leu Lys Ile Ser Thr Arg Leu Asn Leu Leu Glu Gln Glu Leu Ser Glu		415
	420	425
Lys Asn Val Gln Leu Gln Thr Ser Thr Ala Glu Glu Lys Thr Lys Ile		430
	435	440
Ser Glu Gln Val Glu Val Leu Gln Lys Glu Lys Asp Gln Leu Gln Lys		445
	450	455
Arg Arg His Asp Val Asp Glu Lys Leu Lys Asn Gly Arg Val Leu Ser		460
465	470	475
Pro Glu Glu Glu His Val Leu Phe Gln Leu Glu Glu Gly Ile Glu Ala		480
	485	490
Leu Glu Ala Ala Ile Glu Tyr Arg Asn Glu Ser Ile Gln Asn Arg Gln		495
	500	505
Lys Ser Leu Arg Ala Ser Phe His Asn Leu Ser Arg Gly Glu Ala Asn		510
	515	520
Val Leu Glu Lys Leu Ala Cys Leu Ser Pro Val Glu Ile Arg Thr Ile		525
	530	535
Leu Phe Arg Tyr Phe Asn Lys Val Val Asn Leu Arg Glu Ala Glu Arg		540
545	550	555
Lys Gln Gln Leu Tyr Asn Glu Glu Met Lys Met Lys Val Leu Glu Arg		560
	565	570
Asp Asn Met Val Arg Glu Leu Glu Ser Ala Leu Asp His Leu Lys Leu		575
	580	585
Gln Cys Asp Arg Arg Leu Thr Leu Gln Gln Lys Glu His Glu Gln Lys		590
	595	600
Met Gln Leu Leu Leu His His Phe Lys Glu Gln Asp Gly Glu Gly Ile		605
	610	615
Met Glu Thr Phe Lys Thr Tyr Glu Asp Lys Ile Gln Gln Leu Glu Lys		620
625	630	635
Asp Leu Tyr Phe Tyr Lys Lys Thr Ser Arg Asp His Lys Lys Lys Leu		640

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 Lys Glu Leu Val Gly Glu Ala Ile Arg Arg Gln Leu Ala Ser Ser Glu  
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 Tyr Gln Glu Ala Gly Asp Gly Val Leu Lys Pro Glu Gly Gly Gly Met  
 675 680 685  
 Leu Ser Glu Glu Leu Lys Trp Ala Ser Arg Pro Glu Ser Met Lys Leu  
 690 695 700  
 Ser Gly Arg Glu Arg Glu Met Asp Ser Ser Ala Ser Ser Leu Arg Thr  
 705 710 715 720  
 Gln Pro Asn Pro Gln Lys Leu Trp Glu Asp Ile Pro Glu Leu Pro Pro  
 725 730 735  
 Ile His Ser Ser Leu Ala Pro Pro Ser Gly His Met Leu Gly Asn Glu  
 740 745 750  
 Asn Lys Thr Glu Thr Asp Asp Asn Gln Phe Thr Lys Ser His Ser Arg  
 755 760 765  
 Leu Ser Ser Gln Ile Gln Val Val Gly Asn Val Gly Arg Leu His Gly  
 770 775 780  
 Val Thr Pro Val Lys Leu Cys Arg Lys Glu Leu Arg Gln Ile Ser Ala  
 785 790 795 800  
 Leu Glu Leu Ser Leu Arg Arg Ser Ser Leu Gly Val Gly Ile Gly Ser  
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<210> 4235  
 <211> 971  
 <212> DNA  
 <213> Homo sapiens

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 Thr Thr Thr Ile Thr Ser Gly Phe Thr Val Asn Gln Asn Gln Leu Leu  
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 Ser Arg Gly Phe Glu Asn Leu Val Pro Tyr Thr Ser Thr Val Ser Val  
 65 70 75 80  
 Val Ala Thr Pro Val Met Thr Tyr Gly His Leu Glu Gly Leu Ile Asn  
 85 90 95  
 Glu Trp Asn Leu Glu Leu Glu Asp Gln Glu Lys Tyr Phe Leu Leu Gln  
 100 105 110  
 Ala Thr Gln Val Asn Ala Trp Asp His Thr Leu Ile Glu Asn Gly Glu  
 115 120 125  
 Met Ile Arg Ile Leu His Gly Glu Val Asn Lys Val Lys Leu Asp Gln  
 130 135 140  
 Lys Arg Leu Glu Gln Glu Leu Asp Phe Ile Leu Ser Gln Gln Gln Glu  
 145 150 155 160  
 Leu Glu Phe Leu Leu Thr Tyr Leu Glu Glu Ser Thr Arg Asp Gln Ser  
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 Thr Arg Ser Ala Glu Phe  
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 <212> DNA  
 <213> Homo sapiens

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<211> 124

<212> PRT

<213> Homo sapiens

<400> 4238

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			20					25					30		
His	Ser	Pro	Glu	Leu	Leu	Pro	Val	Pro	Ile	Leu	Asp	Ser	Leu	Ser	Cys
			35				40					45			
Phe	Leu	Asp	Ser	Leu	Ser	Cys	Phe	Leu	Asp	Ser	Leu	Gln	Ile	Ala	Arg
	50					55					60				
Ala	Met	Gly	Val	Ala	Asp	Glu	Ala	Leu	Gly	Asn	Val	Arg	Thr	Val	Arg
					70					75				80	
Ala	Phe	Ala	Met	Glu	Gln	Arg	Glu	Glu	Glu	Arg	Tyr	Gly	Ala	Glu	Leu
				85				90						95	
Glu	Ala	Cys	Arg	Cys	Arg	Ala	Glu	Glu	Leu	Gly	Arg	Gly	Ile	Ala	Leu
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Phe	Gln	Gly	Leu	Ser	Asn	Ile	Ala	Phe	Asn	Cys	Glu				
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<210> 4239

<211> 3127

<212> DNA

<213> Homo sapiens

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<211> 860

<212> PRT

<213> Homo sapiens

<400> 4240

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 Arg Arg Ser Ser Ala Ser Ile Ser Arg Gln Ser His Leu Glu Pro Asp  
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 Thr Phe Glu Ala Thr Gln Asp Asp Met Val Thr Val Pro Lys Ser Pro  
 50 55 60  
 Pro Ala Tyr Ala Arg Ser Ser Asp Met Tyr Ser His Met Gly Thr Met  
 65 70 75 80  
 Pro Arg Pro Ser Ile Lys Lys Ala Gln Asn Ser Gln Ala Ala Arg Gln  
 85 90 95  
 Ala Gln Glu Ala Gly Pro Lys Pro Asn Leu Val Pro Gly Gly Val Pro  
 100 105 110  
 Asp Pro Pro Gly Leu Glu Ala Ala Lys Glu Val Met Val Lys Ala Thr  
 115 120 125  
 Gly Pro Leu Glu Asp Thr Pro Ala Met Glu Pro Asn Pro Ser Ala Val  
 130 135 140  
 Glu Val Asp Pro Ile Arg Lys Pro Glu Val Pro Thr Gly Asp Val Glu  
 145 150 155 160  
 Glu Glu Arg Pro Pro Arg Asp Val His Ser Glu Arg Ala Ala Gly Glu  
 165 170 175  
 Pro Glu Ala Gly Ser Asp Tyr Val Lys Phe Ser Lys Glu Lys Tyr Ile  
 180 185 190  
 Leu Asp Ser Ser Pro Glu Lys Leu His Lys Glu Leu Glu Glu Leu  
 195 200 205  
 Lys Leu Ser Ser Thr Asp Leu Arg Ser His Ala Trp Tyr His Gly Arg  
 210 215 220  
 Ile Pro Arg Glu Val Ser Glu Thr Leu Val Gln Arg Asn Gly Asp Phe  
 225 230 235 240  
 Leu Ile Arg Asp Ser Leu Thr Ser Leu Gly Asp Tyr Val Leu Thr Cys  
 245 250 255  
 Arg Trp Arg Asn Gln Ala Leu His Phe Lys Ile Asn Lys Val Val Val  
 260 265 270  
 Lys Ala Gly Glu Ser Tyr Thr His Ile Gln Tyr Leu Phe Glu Gln Glu  
 275 280 285  
 Ser Phe Asp His Val Pro Ala Leu Val Arg Tyr His Val Gly Ser Arg  
 290 295 300  
 Lys Ala Val Ser Glu Gln Ser Gly Ala Ile Ile Tyr Cys Pro Val Asn  
 305 310 315 320  
 Arg Thr Phe Pro Leu Arg Tyr Leu Glu Ala Ser Tyr Gly Leu Gly Gln  
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 Gly Ser Ser Lys Pro Ala Ser Pro Val Ser Pro Ser Gly Pro Lys Gly  
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 Ser His Met Lys Arg Arg Ser Val Thr Met Thr Asp Gly Leu Thr Ala  
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 370 375 380  
 Arg Pro Arg Asp Ser Ile Arg Ser Cys Ala Leu Ser Met Asp Gln Ile  
 385 390 395 400  
 Pro Asp Leu His Ser Pro Met Ser Pro Ile Ser Glu Ser Pro Ser Ser  
 405 410 415  
 Pro Ala Tyr Ser Thr Val Thr Arg Val His Ala Ala Pro Ala Ala Pro  
 420 425 430  
 Ser Ala Thr Ala Leu Pro Ala Ser Pro Val Ala Arg Cys Ser Ser Glu

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Pro  Gln  Leu  Cys  Pro  Gly  Ser  Ala  Pro  Lys  Thr  His  Gly  Glu  Ser  Asp
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Lys  Gly  Pro  His  Thr  Ser  Pro  Ser  His  Thr  Leu  Gly  Lys  Ala  Ser  Pro
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Ser  Pro  Ser  Leu  Ser  Ser  Tyr  Ser  Asp  Pro  Asp  Ser  Gly  His  Tyr  Cys
      485              490              495
Gln  Leu  Gln  Pro  Pro  Val  Arg  Gly  Ser  Arg  Glu  Trp  Ala  Ala  Thr  Glu
      500              505              510
Thr  Ser  Ser  Gln  Gln  Ala  Arg  Ser  Tyr  Gly  Glu  Arg  Leu  Lys  Glu  Leu
      515              520              525
Ser  Glu  Asn  Gly  Ala  Pro  Glu  Gly  Asp  Trp  Gly  Lys  Thr  Phe  Thr  Val
      530              535              540
Pro  Ile  Val  Glu  Val  Thr  Ser  Ser  Phe  Asn  Pro  Ala  Thr  Phe  Gln  Ser
545              550              555              560
Leu  Leu  Ile  Pro  Arg  Asp  Asn  Arg  Pro  Leu  Glu  Val  Gly  Leu  Leu  Arg
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Lys  Val  Lys  Glu  Leu  Leu  Ala  Glu  Val  Asp  Ala  Arg  Thr  Leu  Ala  Arg
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His  Val  Thr  Lys  Val  Asp  Cys  Leu  Val  Ala  Arg  Ile  Leu  Gly  Val  Thr
      595              600              605
Lys  Glu  Met  Gln  Thr  Leu  Met  Gly  Val  Arg  Trp  Gly  Met  Glu  Leu  Leu
      610              615              620
Thr  Leu  Pro  His  Gly  Arg  Gln  Leu  Arg  Leu  Asp  Leu  Leu  Glu  Arg  Phe
625              630              635              640
His  Thr  Met  Ser  Ile  Met  Leu  Ala  Val  Asp  Ile  Leu  Gly  Cys  Thr  Gly
      645              650              655
Ser  Ala  Glu  Glu  Arg  Ala  Ala  Leu  Leu  His  Lys  Thr  Ile  Gln  Leu  Ala
      660              665              670
Ala  Glu  Leu  Arg  Gly  Thr  Met  Gly  Asn  Met  Phe  Ser  Phe  Ala  Ala  Val
      675              680              685
Met  Gly  Ala  Leu  Asp  Met  Ala  Gln  Ile  Ser  Arg  Leu  Glu  Gln  Thr  Trp
      690              695              700
Val  Thr  Leu  Arg  Gln  Arg  His  Thr  Glu  Gly  Ala  Ile  Leu  Tyr  Glu  Lys
705              710              715              720
Lys  Leu  Lys  Pro  Phe  Leu  Lys  Ser  Leu  Asn  Glu  Gly  Lys  Glu  Gly  Pro
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Pro  Leu  Ser  Asn  Thr  Thr  Phe  Pro  His  Val  Leu  Pro  Leu  Ile  Thr  Leu
      740              745              750
Leu  Glu  Cys  Asp  Ser  Ala  Pro  Pro  Glu  Gly  Pro  Glu  Pro  Trp  Gly  Ser
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Thr  Glu  His  Gly  Val  Glu  Val  Val  Leu  Ala  His  Leu  Glu  Ala  Ala  Arg
      770              775              780
Thr  Val  Ala  His  His  Gly  Gly  Leu  Tyr  His  Thr  Asn  Ala  Glu  Val  Lys
785              790              795              800
Leu  Gln  Gly  Phe  Gln  Ala  Arg  Pro  Glu  Leu  Leu  Glu  Val  Phe  Ser  Thr
      805              810              815
Glu  Phe  Gln  Met  Arg  Leu  Leu  Trp  Gly  Ser  Gln  Gly  Ala  Ser  Ser  Ser
      820              825              830
Gln  Ala  Arg  Arg  Tyr  Glu  Lys  Phe  Asp  Lys  Val  Leu  Thr  Ala  Leu  Ser
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His  Lys  Leu  Glu  Pro  Ala  Val  Arg  Ser  Ser  Glu  Leu
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 <211> 479  
 <212> DNA  
 <213> Homo sapiens

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<210> 4242  
 <211> 159  
 <212> PRT  
 <213> Homo sapiens

<400> 4242  
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 Cys Trp Lys Val Ser Pro His Ile Lys Met Asp Leu Leu Gln Trp Ile  
 35 40 45  
 Gln Ser Lys Thr Gln Ser Asp Gly Ser Thr Leu Gln Gln Gly Ser Leu  
 50 55 60  
 Glu Phe Phe Ser Cys Leu Tyr Glu Ile Gln Glu Glu Phe Ile Gln  
 65 70 75 80  
 Gln Ala Leu Ser His Phe Gln Val Ile Val Ser Asn Ile Ala Ser  
 85 90 95  
 Lys Met Glu His Met Val Ser Ser Phe Cys Leu Lys Arg Cys Arg Ser  
 100 105 110  
 Ala Gln Val Leu His Leu Tyr Gly Ala Thr Tyr Ser Ala Asp Gly Glu  
 115 120 125  
 Asp Arg Ala Arg Cys Pro Gln Glu Arg Thr Arg Cys Trp Cys Ser Tyr  
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&lt;400&gt; 4243

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&lt;210&gt; 4244

&lt;211&gt; 849

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4244

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Ala Glu Phe Glu Arg Thr Tyr Val Asp Glu Val Asn Ser Glu Leu Val
      35           40           45
Asn Ile Tyr Thr Phe Asn His Thr Val Thr Arg Asn Arg Thr Glu Gly
      50           55           60
Val Arg Val Ser Val Asn Val Leu Asn Lys Gln Lys Gly Ala Pro Leu
65           70           75           80
Leu Phe Val Val Arg Gln Lys Glu Ala Val Val Ser Phe Gln Val Pro
      85           90           95
Leu Ile Leu Arg Gly Met Phe Gln Arg Lys Tyr Leu Tyr Gln Lys Val
      100          105          110
Glu Arg Thr Leu Cys Gln Pro Pro Thr Lys Asn Glu Ser Glu Ile Gln
      115          120          125
Phe Phe Tyr Val Asp Val Ser Thr Leu Ser Pro Val Asn Thr Thr Tyr
      130          135          140
Gln Leu Arg Val Ser Arg Met Asp Asp Phe Val Leu Arg Thr Gly Glu
145          150          155          160
Gln Phe Ser Phe Asn Thr Thr Ala Ala Gln Pro Gln Tyr Phe Lys Tyr
      165          170          175
Glu Phe Pro Glu Gly Val Asp Ser Val Ile Val Lys Val Thr Ser Asn
      180          185          190
Lys Ala Phe Pro Cys Ser Val Ile Ser Ile Gln Asp Val Leu Cys Pro
      195          200          205
Val Tyr Asp Leu Asp Asn Asn Val Ala Phe Ile Gly Met Tyr Gln Thr
      210          215          220
Met Thr Lys Lys Ala Ala Ile Thr Val Gln Arg Lys Asp Phe Pro Ser
225          230          235          240
Asn Ser Phe Tyr Val Val Val Val Val Lys Thr Glu Asp Gln Ala Cys
      245          250          255
Gly Gly Ser Leu Pro Phe Tyr Pro Phe Ala Glu Asp Glu Pro Val Asp
      260          265          270
Gln Gly His Arg Gln Lys Thr Leu Ser Val Leu Val Ser Gln Ala Val
      275          280          285
Thr Ser Glu Ala Tyr Val Ser Gly Met Leu Phe Cys Leu Gly Ile Phe
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Leu Ser Phe Tyr Leu Leu Thr Val Leu Leu Ala Cys Trp Glu Asn Trp
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Arg Gln Lys Lys Lys Thr Leu Leu Val Ala Ile Asp Arg Ala Cys Pro
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Glu Ser Ala Ser Leu Leu Gly His Pro Arg Val Leu Ala Asp Ser Phe
      340          345          350
Pro Gly Ser Ser Pro Tyr Glu Gly Tyr Asn Tyr Gly Ser Phe Glu Asn
      355          360          365
Val Ser Gly Ser Thr Asp Gly Leu Val Asp Ser Ala Gly Thr Gly Asp

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 Ser Gly Gln Met Arg Gln Leu Cys Ile Ala Met Gly Arg Ser Phe Glu  
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 Pro Val Gly Thr Arg Pro Arg Val Asp Ser Met Ser Ser Val Glu Glu  
 420 425 430  
 Asp Asp Tyr Asp Thr Leu Thr Asp Ile Asp Ser Asp Lys Asn Val Ile  
 435 440 445  
 Arg Thr Lys Gln Tyr Leu Tyr Val Ala Asp Leu Ala Arg Lys Asp Lys  
 450 455 460  
 Arg Val Leu Arg Lys Lys Tyr Gln Ile Tyr Phe Trp Asn Ile Ala Thr  
 465 470 475 480  
 Ile Ala Val Phe Tyr Ala Leu Pro Val Val Gln Leu Val Ile Thr Tyr  
 485 490 495  
 Gln Thr Val Val Asn Val Thr Gly Asn Gln Asp Ile Cys Tyr Tyr Asn  
 500 505 510  
 Phe Leu Cys Ala His Pro Leu Gly Asn Leu Ser Ala Phe Asn Asn Ile  
 515 520 525  
 Leu Ser Asn Leu Gly Tyr Ile Leu Leu Gly Leu Leu Phe Leu Leu Ile  
 530 535 540  
 Ile Leu Gln Arg Glu Ile Asn His Asn Arg Ala Leu Leu Arg Asn Asp  
 545 550 555 560  
 Leu Cys Ala Leu Glu Cys Gly Ile Pro Lys His Phe Gly Leu Phe Tyr  
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 Ala Met Gly Thr Ala Leu Met Met Glu Gly Leu Leu Ser Ala Cys Tyr  
 580 585 590  
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 Tyr Met Ile Ala Gly Leu Cys Met Leu Lys Leu Tyr Gln Lys Arg His  
 610 615 620  
 Pro Asp Ile Asn Ala Ser Ala Tyr Ser Ala Tyr Ala Cys Leu Ala Ile  
 625 630 635 640  
 Val Ile Phe Phe Ser Val Leu Gly Val Val Phe Gly Lys Gly Asn Thr  
 645 650 655  
 Ala Phe Trp Ile Val Phe Ser Ile Ile His Ile Ile Ala Thr Leu Leu  
 660 665 670  
 Leu Ser Thr Gln Leu Tyr Tyr Met Gly Arg Trp Lys Leu Asp Ser Gly  
 675 680 685  
 Ile Phe Arg Arg Ile Leu His Val Leu Tyr Thr Asp Cys Ile Arg Gln  
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 Cys Ser Gly Pro Leu Tyr Val Asp Arg Met Val Leu Leu Val Met Gly  
 705 710 715 720  
 Asn Val Ile Asn Trp Ser Leu Ala Ala Tyr Gly Leu Ile Met Arg Pro  
 725 730 735  
 Asn Asp Phe Ala Ser Tyr Leu Leu Ala Ile Gly Ile Cys Asn Leu Leu  
 740 745 750  
 Leu Tyr Phe Ala Phe Tyr Ile Ile Met Lys Leu Arg Ser Gly Glu Arg  
 755 760 765  
 Ile Lys Leu Ile Pro Leu Leu Cys Ile Val Cys Thr Ser Val Val Trp  
 770 775 780  
 Gly Phe Ala Leu Phe Phe Phe Gln Gly Leu Ser Thr Trp Gln Lys  
 785 790 795 800  
 Thr Pro Ala Glu Ser Arg Glu His Asn Arg Asp Cys Ile Leu Leu Asp

			805				810				815				
Phe	Phe	Asp	Asp	His	Asp	Ile	Trp	His	Phe	Leu	Ser	Ser	Ile	Ala	Met
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Phe	Gly	Ser	Phe	Leu	Val	Ser	Gly	Pro	Pro	Gly	Ala	Ala	Leu	Arg	Ile
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Thr															

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 <211> 909  
 <212> DNA  
 <213> Homo sapiens

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 909

<210> 4246  
 <211> 303  
 <212> PRT  
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<400> 4246  
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      35           40           45
Gly Arg Gln Leu Gln Ala Ala Glu Glu Ala Val Glu Lys Leu Lys Ala
      50           55           60
Thr Gln Ala Asp Met Gly Glu Lys Leu Ser Cys Thr Ser Asn His Leu
      65           70           75           80
Ala Glu Cys Gln Ala Ala Met Leu Arg Lys Asp Lys Glu Gly Ala Ala
      85           90           95
Leu Arg Glu Asp Leu Glu Arg Thr Gln Lys Glu Leu Glu Lys Ala Thr
      100          105          110
Thr Lys Ile Gln Glu Tyr Tyr Asn Lys Leu Cys Gln Glu Val Thr Asn
      115          120          125
Arg Glu Arg Asn Asp Gln Lys Met Leu Ala Asp Leu Asp Asp Leu Asn
      130          135          140
Arg Thr Lys Lys Tyr Leu Glu Glu Arg Leu Ile Glu Leu Leu Arg Asp
      145          150          155          160
Lys Asp Ala Leu Trp Gln Lys Ser Asp Ala Leu Glu Phe Gln Gln Lys
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Leu Asp Cys Lys Arg Glu Phe Ser Trp Met Val Arg Arg His His Cys
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Thr Ser Gln Gly Glu Leu Ser Pro Ala Leu Ser Pro Ala Ser Pro Gly
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Pro Gln Ala Thr Gly Gly Gln Gly Ala Asn Thr Asp Tyr Arg Pro Pro
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Asp Asp Ala Val Phe Asp Ile Ile Thr Asp Glu Glu Leu Cys Gln
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&lt;211&gt; 5755

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4247

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<211> 1297

<212> PRT

<213> Homo sapiens

<400> 4248

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Ala	Pro	Ser	Pro	Leu	Pro	Leu	His	Thr	His	Ala	Arg	Ser	Leu	Ala	Gly
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Ala	Arg	Thr	Pro	Pro	Ala	Pro	Asp	Pro	His	Leu	Gly	Gly	Arg	His	Thr
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Leu	Gly	Ser	Pro	Ser	Arg	Gly	Ser	Arg	Ser	Gly	Met	Glu	Ala	Ala	Arg
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Thr	Glu	Arg	Pro	Ala	Gly	Arg	Pro	Gly	Ala	Pro	Leu	Val	Arg	Thr	Gly
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Leu	Leu	Leu	Leu	Ser	Thr	Trp	Val	Leu	Ala	Gly	Ala	Glu	Ile	Thr	Trp
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Glu	Glu	Leu	Ala	Ser	Ala	Arg	Arg	Ala	Ala	Val	Leu	Gly	Arg	Arg	Ala
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Leu Thr Lys Leu Tyr Asp	Phe Asn Leu Gly Ser	Val Thr Glu Ser Ser
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Thr Phe Tyr Ile Gln Ser	Leu Leu Phe His Pro	Lys Gln Glu Asp Trp
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Val Leu Ala Tyr Ser Leu	Asp Gln Lys Leu Tyr	Ser Ser Met Asp Phe
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Gly Arg Arg Trp Gln Leu	Met His Glu Arg Ile	Thr Pro Asn Arg Phe
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Tyr Trp Ser Val Ala Gly	Leu Asp Lys Glu Ala	Asp Leu Val His Met
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Glu Val Arg Thr Thr Asp	Gly Tyr Ala His Tyr	Leu Thr Cys Arg Ile
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&lt;211&gt; 553

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4249

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&lt;210&gt; 4252

&lt;211&gt; 352

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4252

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 20 25 30  
 Pro Asp Ile Thr Lys Arg Tyr Leu Arg Leu Thr Cys Ala Pro Asp Pro  
 35 40 45  
 Ser Thr Val Arg Pro Val Ala Val Leu Lys Lys Ser Leu Cys Met Val  
 50 55 60  
 Lys Cys His Trp Lys Glu Lys Gln Asp Tyr Ala Phe Ala Cys Glu Gln

65 70 75 80  
 Met Lys Ser Ile Arg Gln Asp Leu Thr Val Gln Gly Ile Arg Thr Glu  
 85 90 95  
 Phe Thr Val Glu Val Tyr Glu Thr His Ala Arg Ile Ala Leu Glu Lys  
 100 105 110  
 Gly Asp His Glu Glu Phe Asn Gln Cys Gln Thr Gln Leu Lys Ser Leu  
 115 120 125  
 Tyr Ala Glu Asn Leu Pro Gly Asn Val Gly Glu Phe Thr Ala Tyr Arg  
 130 135 140  
 Ile Leu Tyr Tyr Ile Phe Thr Lys Asn Ser Gly Asp Ile Thr Thr Glu  
 145 150 155 160  
 Leu Ala Tyr Leu Thr Arg Glu Leu Lys Ala Asp Pro Cys Val Ala His  
 165 170 175  
 Ala Leu Ala Leu Arg Thr Ala Trp Ala Leu Gly Asn Tyr His Arg Phe  
 180 185 190  
 Phe Arg Leu Tyr Cys His Ala Pro Cys Met Ser Gly Tyr Leu Val Asp  
 195 200 205  
 Lys Phe Ala Asp Arg Glu Arg Lys Val Ala Leu Lys Ala Met Ile Lys  
 210 215 220  
 Thr Tyr Val Val Pro Ser Ser Leu Leu Pro Leu Leu Phe Pro Ser Phe  
 225 230 235 240  
 Arg Leu Ala Pro Pro Leu Arg Pro Ala Pro Gly Arg Arg Pro Pro Pro  
 245 250 255  
 Ala Pro Asn Pro Cys Pro Gly Pro Cys Phe Pro Ile Ile Phe Leu His  
 260 265 270  
 Ser Ala Leu Pro Ser Pro Val Pro Leu Ala Leu Leu Val Gly His Leu  
 275 280 285  
 Cys Val Pro Gly His Ser Ser Pro Ser Pro His Cys Ser Gln Leu Thr  
 290 295 300  
 Ala Ser Gly Ala Ser Ser Pro Pro His Leu Cys Val Ser Ser Ser Cys  
 305 310 315 320  
 Ser Leu Leu Pro Gly Pro Pro Ser Ser Leu Leu Ala Leu Gly Phe Leu  
 325 330 335  
 Arg Thr Leu Arg Ser Leu Leu Ser Gln Leu Val Ala Val Leu Pro Pro  
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&lt;210&gt; 4253

&lt;211&gt; 1287

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4253

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 360

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 480  
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 1287

&lt;210&gt; 4254

&lt;211&gt; 114

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4254

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Leu	Ala	His	Val	Ala	Cys	Ser	Gly	His	Gly	Met	Lys	Gln	Lys	Arg	Lys
			20					25					30		
Pro	Ala	Ser	Ser	Glu	Pro	Met	Pro	Glu	Asp	Ala	Leu	Gly	Gly	Ser	Ala
			35					40					45		
Val	Pro	Val	Arg	Phe	His	Leu	His	Pro	Glu	Gly	Leu	Leu	Trp	Cys	Ser
			50				55					60			
Arg	Cys	Phe	Phe	Ser	His	Gly	Pro	Lys	Gly	Ser	Glu	Pro	Pro	Gly	Arg
						70				75				80	
Ser	Ala	Gly	Leu	Gln	Gly	Ala	Thr	Glu	Arg	Ser	Gly	Arg	Pro	Ser	Val
				85				90						95	
Gln	Ala	Gln	Ala	Gln	Ala	Cys	Glu	Asn	Leu	Val	Pro	Ala	Thr	Val	Trp
			100					105					110		
Asp	Gly														

<210> 4255  
<211> 2205  
<212> DNA  
<213> Homo sapiens

<400> 4255  
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1380



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 2205

&lt;210&gt; 4256

&lt;211&gt; 384

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4256

Met	Ala	Thr	Ser	His	Val	Thr	Asp	Glu	Trp	Met	Thr	Gln	Met	Glu	Met
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Ser	Ser	Leu	Asn	Thr	Tyr	Ile	Val	Arg	Arg	Cys	Ile	Ala	Thr	Pro	Asn
		20						25					30		
Gly	Val	Leu	Arg	Ile	Tyr	Ser	Gly	Ser	Leu	Met	Gly	Gln	Ala	Leu	Asp
		35					40					45			
Pro	Thr	Arg	Lys	Gln	Trp	Tyr	Leu	His	Ala	Val	Ala	Asn	Pro	Gly	Leu
		50				55					60				
Ile	Ser	Leu	Thr	Gly	Pro	Tyr	Leu	Asp	Val	Gly	Gly	Ala	Gly	Tyr	Val
65				70						75				80	
Val	Thr	Ile	Ser	His	Thr	Ile	His	Ser	Ser	Ser	Thr	Gln	Leu	Ser	Ser
				85				90					95		
Gly	His	Thr	Val	Ala	Val	Met	Gly	Ile	Asp	Phe	Thr	Leu	Arg	Tyr	Phe
			100				105						110		
Tyr	Lys	Val	Leu	Met	Asp	Leu	Leu	Pro	Val	Cys	Asn	Gln	Asp	Gly	Gly
		115					120					125			
Asn	Lys	Ile	Arg	Cys	Phe	Ile	Met	Glu	Asp	Arg	Gly	Tyr	Leu	Val	Ala
		130				135					140				
His	Pro	Thr	Leu	Ile	Asp	Pro	Lys	Gly	His	Ala	Pro	Val	Glu	Gln	Gln

145		150		155		160
His Ile Thr His Lys Glu Pro Leu Val Ala Asn Asp Ile Leu Asn His						
	165		170		175	
Pro Asn Phe Val Lys Lys Asn Leu Cys Asn Ser Phe Ser Asp Arg Thr						
	180		185		190	
Val Gln Arg Phe Tyr Lys Phe Asn Thr Ser Leu Ala Gly Asp Leu Thr						
	195		200		205	
Asn Leu Val His Gly Ser His Cys Ser Lys Tyr Arg Leu Ala Arg Ile						
	210		215		220	
Pro Gly Thr Asn Ala Phe Val Gly Ile Val Asn Glu Thr Cys Asp Ser						
225		230		235		240
Leu Ala Phe Cys Ala Cys Ser Met Val Asp Arg Leu Cys Leu Asn Cys						
	245		250		255	
His Arg Met Glu Gln Asn Glu Cys Glu Cys Pro Cys Glu Cys Pro Leu						
	260		265		270	
Glu Val Asn Glu Cys Thr Gly Asn Leu Thr Asn Ala Glu Asn Arg Asn						
	275		280		285	
Pro Ser Cys Glu Val His Gln Glu Pro Val Thr Tyr Thr Ala Ile Asp						
	290		295		300	
Pro Gly Leu Gln Asp Ala Leu His Gln Cys Val Asn Ser Arg Cys Ser						
305		310		315		320
Gln Arg Leu Glu Ser Gly Asp Cys Phe Gly Val Leu Asp Cys Glu Trp						
	325		330		335	
Cys Met Val Asp Ser Asp Gly Lys Thr His Leu Asp Lys Pro Tyr Cys						
	340		345		350	
Ala Pro Gln Lys Glu Cys Phe Gly Gly Ile Val Gly Ala Lys Ser Pro						
	355		360		365	
Tyr Val Asp Asp Met Gly Ala Ile Gly Asp Glu Val Ile Thr Leu Lys						
	370		375		380	

&lt;210&gt; 4257

&lt;211&gt; 1541

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4257

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 180  
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<210> 4258

<211> 314

<212> PRT

<213> Homo sapiens

<400> 4258

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Asp	Gln	Ser	Pro	Gly	Lys	His	Met	Val	Thr	Met	Asp	Gly	Val	Arg	Glu
			20					25					30		
Glu	Asp	Leu	Ala	Pro	Phe	Ser	Leu	Arg	Lys	Arg	Trp	Glu	Ser	Glu	Pro
			35					40					45		
His	Pro	Tyr	Val	Phe	Phe	Asn	Asp	Asp	His	Thr	Thr	Met	Thr	Phe	Ile
			50				55				60				
Gly	Phe	His	Leu	Gln	Pro	Asn	Ile	Asn	Gly	Ser	Val	Asp	Ala	Ile	Ser
65					70					75				80	
His	Leu	Thr	Gly	Lys	Val	Ile	Lys	Arg	Asp	Val	Met	Thr	Arg	Asp	Leu
				85				90						95	
Tyr	Gln	Gly	Leu	Leu	Leu	Gln	Arg	Val	Pro	Phe	Asn	Val	Asp	Phe	Asp

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<210> 4259
<211> 377
<212> DNA
<213> Homo sapiens
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<210> 4260
<211> 125
<212> PRT
<213> Homo sapiens
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&lt;400&gt; 4260

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Gly Glu Pro Ala Pro Glu Glu Pro Pro Pro Ala Pro Arg Pro Ser Arg
          20           25           30
Glu Gln Lys Cys Val Lys Cys Lys Glu Ala Gln Pro Val Val Val Ile
          35           40           45
Arg Ala Gly Asp Ala Phe Cys Arg Asp Cys Phe Lys Ala Phe Tyr Val
          50           55           60
His Lys Phe Arg Ala Met Leu Gly Lys Asn Arg Leu Ile Phe Pro Gly
65           70           75           80
Glu Lys Val Leu Leu Ala Trp Ser Gly Gly Pro Ser Ser Ser Ser Met
          85           90           95
Val Trp Gln Val Leu Glu Gly Leu Ser Gln Asp Ser Ala Lys Arg Leu
          100          105          110
Arg Phe Val Ala Gly Val Ile Phe Val Asp Glu Gly Ala
          115          120          125

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&lt;210&gt; 4261

&lt;211&gt; 592

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4261

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592

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&lt;210&gt; 4262

&lt;211&gt; 156

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4262

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His Met Phe Lys Asp Lys Gly Val Trp Gly Asn Lys Gln Asp His Arg

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900

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<213> Homo sapiens

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His Met Gly Phe Asn Asp Asp Arg Arg Phe Pro Asp Phe Ser Tyr Ile			
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Thr Gln Asn Gly Arg Leu Thr Asp Phe Leu Asp Cys Val Ile Ile Ser			
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His Phe His Leu Asp His Cys Gly Ala Leu Pro Tyr Phe Ser Glu Met			
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Val Gly Tyr Asp Gly Pro Ile Tyr Met Thr His Pro Thr Gln Ala Ile			
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Cys Pro Ile Leu Leu Glu Asp Tyr Arg Lys Ile Ala Val Asp Lys Lys			
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Gly Glu Ala Asn Phe Phe Thr Ser Gln Met Ile Lys Asp Cys Met Lys			
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Lys Val Val Ala Val His Leu His Gln Thr Val Gln Val Asp Asp Glu			
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Leu Glu Ile Lys Ala Tyr Tyr Ala Gly His Val Leu Gly Ala Ala Met			
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Phe Gln Ile Lys Val Gly Ser Glu Ser Val Val Tyr Thr Gly Asp Tyr			
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Asn Met Thr Pro Asp Arg His Leu Gly Ala Ala Trp Ile Asp Lys Cys			
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Arg Pro Asn Leu Leu Ile Thr Glu Ser Thr Tyr Ala Thr Thr Ile Arg			
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Asp Ser Lys Arg Cys Arg Glu Arg Asp Phe Leu Lys Lys Val His Glu			
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Thr Val Glu Arg Gly Gly Lys Val Leu Ile Pro Val Phe Ala Leu Gly			
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Arg Ala Gln Glu Leu Cys Ile Leu Leu Glu Thr Phe Trp Glu Arg Met			
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Asn Leu Lys Val Pro Ile Tyr Phe Ser Thr Gly Leu Thr Glu Lys Ala			
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Lys Thr Phe Val Gln Arg Asn Met Phe Glu Phe Lys His Ile Lys Ala			
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Phe Asp Arg Ala Phe Ala Asp Asn Pro Gly Pro Met Val Val Phe Ala			
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Thr Pro Gly Met Leu His Ala Gly Gln Ser Leu Gln Ile Phe Arg Lys			
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Trp Ala Gly Asn Glu Lys Asn Met Val Ile Met Pro Gly Tyr Cys Val			
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Gln Gly Thr Val Gly His Lys Ile Leu Ser Gly Gln Arg Lys Leu Glu			
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Met Glu Gly Arg Gln Val Leu Glu Val Lys Met Gln Val Glu Tyr Met			
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Gln Ala Glu Pro Glu Ser Val Leu Leu Val His Gly Glu Ala Lys Lys			
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 Ile Met Lys Asp Ser Asn Phe Arg Leu Val Ser Ser Glu Gln Ala Leu  
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 Lys Glu Leu Gly Leu Ala Glu His Gln Leu Arg Phe Thr Cys Arg Val  
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 His Leu His Asp Thr Arg Lys Glu Gln Glu Thr Ala Leu Arg Val Tyr  
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 Ser His Leu Lys Ser Val Leu Lys Asp His Cys Val Gln His Leu Pro  
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 Ser Glu Asp Pro Gly Thr Lys Val Leu Leu Val Ser Trp Thr Tyr Gln  
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 Pro Gln Ala Pro Ser  
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&lt;210&gt; 4267

&lt;211&gt; 2230

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4267

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&lt;210&gt; 4268

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 <213> Homo sapiens

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 Lys Arg Cys Glu Ser Cys Ser Gln Lys Leu Glu Arg Glu Asn Asn His  
 50 55 60  
 Cys Asn Ile Ser His Ser Ile Ile Leu Asn Ser Glu Asp Gly Glu Ile  
 65 70 75 80  
 Leu Asn Asn Glu Glu His Glu Tyr Ala Ser Lys Lys Arg Lys Lys Asp  
 85 90 95  
 His Phe Arg Asn Asp Thr Asn Thr Gln Ser Phe Tyr His Glu Lys Trp  
 100 105 110  
 Ile Tyr Val His Lys Glu Ser Thr Lys Glu Arg His Gly Tyr Cys Thr  
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 130 135 140  
 Ile Arg Arg Phe Asn Tyr Val Val Lys Leu Leu Gln Leu Ile Ala Lys  
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 Ser Gln Leu Thr Ser Leu Ser Gly Val Ala Gln Lys Asn Tyr Phe Asn  
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 Ile Leu Asp Lys Ile Val Gln Lys Val Leu Asp Asp His His Asn Pro  
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&lt;210&gt; 4270

&lt;211&gt; 1084

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4270

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Lys	Gly	Glu	Lys	Ile	Phe	Tyr	Leu	Ile	Arg	Pro	Thr	Asn	Ala	Asn	Leu						
325														330				335			
Thr	Leu	Phe	Glu	Cys	Trp	Ser	Ser	Ser	Ser	Asn	Gln	Asn	Glu	Met	Phe						
340														345				350			
Phe	Gly	Asp	Gln	Val	Asp	Lys	Cys	Tyr	Lys	Cys	Ser	Val	Lys	Gln	Gly						
355														360				365			
Gln	Thr	Leu	Phe	Ile	Pro	Thr	Gly	Trp	Ile	His	Ala	Val	Leu	Thr	Pro						
370														375				380			
Val	Asp	Cys	Leu	Ala	Phe	Gly	Gly	Asn	Phe	Leu	His	Ser	Leu	Asn	Ile						
385														390				395			
Glu	Met	Gln	Leu	Lys	Ala	Tyr	Glu	Ile	Glu	Lys	Arg	Leu	Ser	Thr	Ala						
405														410				415			
Asp	Leu	Phe	Arg	Phe	Pro	Asn	Phe	Glu	Thr	Ile	Cys	Trp	Tyr	Val	Gly						
420														425				430			
Lys	His	Ile	Leu	Asp	Ile	Phe	Arg	Gly	Leu	Arg	Glu	Asn	Arg	Arg	His						
435														440				445			
Pro	Ala	Ser	Tyr	Leu	Val	His	Gly	Gly	Lys	Ala	Leu	Asn	Leu	Ala	Phe						
450														455				460			
Arg	Ala	Trp	Thr	Arg	Lys	Glu	Ala	Leu	Pro	Asp	His	Glu	Asp	Glu	Ile						
465														470				475			
Pro	Glu	Thr	Val	Arg	Thr	Val	Gln	Leu	Ile	Lys	Asp	Leu	Ala	Arg	Glu						
485														490				495			
Ile	Arg	Leu	Val	Glu	Asp	Ile	Phe	Gln	Gln	Asn	Val	Gly	Lys	Thr	Ser						
500														505				510			
Asn	Ile	Phe	Gly	Leu	Gln	Arg	Ile	Phe	Pro	Ala	Gly	Ser	Ile	Pro	Leu						
515														520				525			
Thr	Arg	Pro	Ala	His	Ser	Thr	Ser	Val	Ser	Met	Ser	Arg	Leu	Ser	Leu						
530														535				540			
Pro	Ser	Lys	Asn	Gly	Ser	Lys	Lys	Lys	Gly	Leu	Lys	Pro	Lys	Glu	Leu						
545														550				555			
Phe	Lys	Lys	Ala	Glu	Arg	Lys	Gly	Lys	Glu	Ser	Ser	Ala	Leu	Gly	Pro						
565														570				575			
Ala	Gly	Gln	Leu	Ser	Tyr	Asn	Leu	Met	Asp	Thr	Tyr	Ser	His	Gln	Ala						
580														585				590			
Leu	Lys	Thr	Gly	Ser	Phe	Gln	Lys	Ala	Lys	Phe	Asn	Ile	Thr	Gly	Ala						
595														600				605			
Cys	Leu	Asn	Asp	Ser	Asp	Asp	Asp	Ser	Pro	Asp	Leu	Asp	Leu	Asp	Gly						
610														615				620			
Asn	Glu	Ser	Pro	Leu	Ala	Leu	Leu	Met	Ser	Asn	Gly	Ser	Thr	Lys	Arg						
625														630				635			
Val	Lys	Ser	Leu	Ser	Lys	Ser	Arg	Arg	Thr	Lys	Ile	Ala	Lys	Lys	Val						
645														650				655			
Asp	Lys	Ala	Arg	Leu	Met	Ala	Glu	Gln	Val	Met	Glu	Asp	Glu	Phe	Asp						
660														665				670			
Leu	Asp	Ser	Asp	Asp	Glu	Leu	Gln	Ile	Asp	Glu	Arg	Leu	Gly	Lys	Glu						

675 680 685  
 Lys Ala Thr Leu Ile Ile Arg Pro Lys Phe Pro Arg Lys Leu Pro Arg  
 690 695 700  
 Ala Lys Pro Cys Ser Asp Pro Asn Arg Val Arg Glu Pro Gly Glu Val  
 705 710 715 720  
 Glu Phe Asp Ile Glu Glu Asp Tyr Thr Thr Asp Glu Asp Met Val Glu  
 725 730 735  
 Gly Val Glu Gly Lys Leu Gly Asn Gly Ser Gly Ala Gly Gly Ile Leu  
 740 745 750  
 Asp Leu Leu Lys Ala Ser Arg Gln Val Gly Gly Pro Asp Tyr Ala Ala  
 755 760 765  
 Leu Thr Glu Ala Pro Ala Ser Pro Ser Thr Gln Glu Ala Ile Gln Gly  
 770 775 780  
 Met Leu Cys Met Ala Asn Leu Gln Ser Ser Ser Ser Ser Pro Ala Thr  
 785 790 795 800  
 Ser Ser Leu Gln Ala Trp Trp Thr Gly Gly Gln Asp Arg Ser Ser Gly  
 805 810 815  
 Ser Ser Ser Ser Gly Leu Gly Thr Val Ser Asn Ser Pro Ala Ser Gln  
 820 825 830  
 Arg Thr Pro Gly Lys Arg Pro Ile Lys Arg Pro Ala Tyr Trp Arg Thr  
 835 840 845  
 Glu Ser Glu Glu Glu Glu Asn Ala Ser Leu Asp Glu Gln Asp Ser  
 850 855 860  
 Leu Gly Ala Cys Phe Lys Asp Ala Glu Tyr Ile Tyr Pro Ser Leu Glu  
 865 870 875 880  
 Ser Asp Asp Asp Asp Pro Ala Leu Lys Ser Arg Pro Lys Lys Lys Lys  
 885 890 895  
 Asn Ser Asp Asp Ala Pro Trp Ser Pro Lys Ala Arg Val Thr Pro Thr  
 900 905 910  
 Leu Pro Lys Gln Asp Arg Pro Val Arg Glu Gly Thr Arg Val Ala Ser  
 915 920 925  
 Ile Glu Thr Gly Leu Ala Ala Ala Lys Leu Ala Gln Gln Glu  
 930 935 940  
 Leu Gln Lys Ala Gln Lys Lys Lys Tyr Ile Lys Lys Lys Pro Leu Leu  
 945 950 955 960  
 Lys Glu Val Glu Gln Pro Arg Pro Gln Asp Ser Asn Leu Ser Leu Thr  
 965 970 975  
 Val Pro Ala Pro Thr Val Ala Ala Thr Pro Gln Leu Val Thr Ser Ser  
 980 985 990  
 Ser Pro Leu Pro Pro Pro Glu Pro Lys Gln Glu Ala Leu Ser Gly Ser  
 995 1000 1005  
 Leu Ala Asp His Glu Tyr Thr Ala Arg Pro Asn Ala Phe Gly Met Ala  
 1010 1015 1020  
 Gln Ala Asn Arg Ser Thr Thr Pro Met Ala Pro Gly Val Phe Leu Thr  
 1025 1030 1035 1040  
 Gln Arg Arg Pro Ser Val Gly Ser Gln Ser Asn Gln Ala Gly Gln Gly  
 1045 1050 1055  
 Lys Arg Pro Lys Lys Gly Leu Ala Thr Ala Lys Gln Arg Leu Gly Arg  
 1060 1065 1070  
 Ile Leu Lys Ile His Arg Asn Gly Lys Leu Leu Leu  
 1075 1080

&lt;210&gt; 4271

&lt;211&gt; 588



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4271

accatgtcat ttcctttgaa ctcaccggga cagcaatctg gattaaagat actacgacaa  
 60  
 ctgactactg attttgtcca tcactacatt gttgccaata acttttcaga gcttttccat  
 120  
 ttgctgtcct caagaaattg caaaaccaga aatcttgta tgaaactaot tttaaatatg  
 180  
 tctgaaaatc caactgcagc cagagacatg atcaatatga aggcattggc agcattaaaa  
 240  
 ctcactctta accacaaaga ggcaaaagcc aatcttgta gtggtgtggc catatttatt  
 300  
 aacataaagg agcatatcag aaaaggctca attgtagtta ataaatatgg ccacaccact  
 360  
 aacaagattg gcttttgcct ctttctgggt aaagatgagt tttaatgctg ccaatgcctt  
 420  
 catattgatc atgtctctgg ctgcagttgg attttcagac atatttaaaa gtagtttcaa  
 480  
 aacaagattt ctggttttgc aatttctga ggacagcaaa tggaaaagct ctgaaaagta  
 540  
 attggcaaca atgtagtgat ggacaaaatc agtagtcagt tgtccgtc  
 588

&lt;210&gt; 4272

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4272

Thr Met Ser Phe Pro Leu Asn Ser Pro Gly Gln Gln Ser Gly Leu Lys  
 1 5 10 15  
 Ile Leu Arg Gln Leu Thr Thr Asp Phe Val His His Tyr Ile Val Ala  
 20 25 30  
 Asn Asn Phe Ser Glu Leu Phe His Leu Leu Ser Ser Arg Asn Cys Lys  
 35 40 45  
 Thr Arg Asn Leu Val Met Lys Leu Leu Leu Asn Met Ser Glu Asn Pro  
 50 55 60  
 Thr Ala Ala Arg Asp Met Ile Asn Met Lys Ala Leu Ala Ala Leu Lys  
 65 70 75 80  
 Leu Ile Phe Asn His Lys Glu Ala Lys Ala Asn Leu Val Ser Gly Val  
 85 90 95  
 Ala Ile Phe Ile Asn Ile Lys Glu His Ile Arg Lys Gly Ser Ile Val  
 100 105 110  
 Val Asn Lys Tyr Gly His Thr Thr Asn Lys Ile Gly Phe Cys Leu Phe  
 115 120 125  
 Leu Val Lys Asp Glu Phe  
 130

&lt;210&gt; 4273

&lt;211&gt; 2081

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4273

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60  
agataggtgg gtgtatgggt ggggtggatgg attgatgcat ggatggatgg gctgcccatt  
120  
gagtaggtgc atgagtggat aaatgggtgg gtgggtaggt gaatagatgt atagatttat  
180  
aataggggga aggggtggatt ggtagatggg tagatggagg gatacattgc tgtgtggata  
240  
ggtaggggtgaa tggatgaagg agggagggat gggcaggtag atggatagat tagtggatgg  
300  
atgggtggat gggctgacaa atggcttgtt cccagactgt ttgtccttgg gtggagtcat  
360  
gcaggtatct attgcagctg ggcctgaact gatatctgaa gagagaagtg gagacagcga  
420  
ccagacagat gaggatggag aacctggctc agaggcccag gccagggccc agccctttgg  
480  
cagcaaaaaa aagcgcctcc tctccgtcca cgacttcgac ttcgaggagg actcagatga  
540  
ctccactcag cctcaaggtc actccctgca cctgtcctca gtccctgagg ccagggacag  
600  
cccacagtcc ctcacagatg agtcctgctc agagaaggca gccctcaca aggctgaggg  
660  
cctggaggag gctgatactg gggcctctgg gtgccactcc catccggaag agcagccgac  
720  
cagcatctca ccttcacagac acggcgccct ggctgagctc tgcccgctg gaggctccca  
780  
tagggaatgg ccctggggaa actgctgctg cactcgggtc ggatgtcatc aggaatgagc  
840  
agctgcccct gcagtacttg gccgatgtgg gacacctctg atgaggaaaag catccgggct  
900  
cacgtgatgg cctcccacca ttccaagcgg agaggccggg cgtcttctga gagttagggg  
960  
ctaggtgctg gagtgcgcac ggagcncgac gtagaggagg aggccctgag gaggaagctg  
1020  
gaggagctga ccagcaacgt cagtgaccag gagaccttcg tccgaggagg aggaagccaa  
1080  
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1140  
ggacggtggc acggctgccc atcaaacc aa cagacaggaa aaaagccca ggacctggg  
1200  
gaccccgctc agtacaacag gaccacagat gaggagctgt cagagctgga ggacagagt  
1260  
gcagtgcagg cctcagaagt ccagcaggca gagagcgagg ttccagacat tgaatccagg  
1320  
attgcagccc tgagggccgc agggctcacg gtgaagccct cgggaaagcc ccggaggaag  
1380  
tcaaacctcc cgatatttct ccctcgagtg gctgggaaac ttggcaagag accagaggac  
1440  
ccaaatgcag acccttcaag tgaggccaag gcaatggctg tgcctatctt ctgagaagaa  
1500  
agttcagtaa ttccctgaaa agtcaaggta aagatgatga ttcttttgat cggaaatcag  
1560

tgtaccgagg ctcgctgaca cagagaaacc ccaacgcgag gaaaggaatg gccagccaca  
 1620  
 ccttcgcgaa acctgtggtg gccaccagt cctaacggga caggacagag agacagagca  
 1680  
 gccctgcact gttttccctc caccacagcc atcctgtccc tcattggctc tgtgctttcc  
 1740  
 actatacaca gtcaccgtcc caatgagaaa caagaaggag caccctccac atggactccc  
 1800  
 acctgcaagt ggacagcgac attcagtcct gcactgctca cctgggttta ctgatgactc  
 1860  
 ctggctgccc caccatcctc tctgatctgt gagaaacagc taagctgctg tgacttccct  
 1920  
 ttaggacaat gttgtgtaaa tctttgaagg acacaccgaa gacctttata ctgtgatctt  
 1980  
 ttaccctttt cactcttggc tttcttatgt tgctttcatg aatggaatgg aaaaaagatg  
 2040  
 actcagttaa ggcacaaaaa aaaaaaaaaa aaaagtcgag c  
 2081

<210> 4274

<211> 235

<212> PRT

<213> Homo sapiens

<400> 4274

Met	Ala	Leu	Gly	Lys	Leu	Leu	Leu	His	Ser	Gly	Arg	Met	Ser	Ser	Gly
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Met	Ser	Ser	Cys	Pro	Cys	Ser	Thr	Trp	Pro	Met	Trp	Asp	Thr	Ser	Asp
			20					25					30		
Glu	Glu	Ser	Ile	Arg	Ala	His	Val	Met	Ala	Ser	His	His	Ser	Lys	Arg
		35					40					45			
Arg	Gly	Arg	Ala	Ser	Ser	Glu	Ser	Gln	Gly	Leu	Gly	Ala	Gly	Val	Arg
	50					55					60				
Thr	Glu	Xaa	Asp	Val	Glu	Glu	Glu	Ala	Leu	Arg	Arg	Lys	Leu	Glu	Glu
65					70					75				80	
Leu	Thr	Ser	Asn	Val	Ser	Asp	Gln	Glu	Thr	Phe	Val	Arg	Gly	Gly	Gly
			85						90					95	
Ser	Gln	Gly	Arg	Lys	Cys	Arg	Ala	Gln	Gln	Gly	Gln	Ile	Ser	Trp	Ala
			100					105					110		
Ser	Pro	Pro	Gly	Gly	Pro	Gly	Arg	Trp	His	Gly	Cys	Pro	Ser	Asn	Gln
		115					120					125			
Gln	Thr	Gly	Lys	Lys	Pro	Gln	Asp	Pro	Gly	Asp	Pro	Val	Gln	Tyr	Asn
	130					135					140				
Arg	Thr	Thr	Asp	Glu	Glu	Leu	Ser	Glu	Leu	Glu	Asp	Arg	Val	Ala	Val
145					150					155				160	
Thr	Ala	Ser	Glu	Val	Gln	Gln	Ala	Glu	Ser	Glu	Val	Ser	Asp	Ile	Glu
			165					170						175	
Ser	Arg	Ile	Ala	Ala	Leu	Arg	Ala	Ala	Gly	Leu	Thr	Val	Lys	Pro	Ser
			180					185					190		
Gly	Lys	Pro	Arg	Arg	Lys	Ser	Asn	Leu	Pro	Ile	Phe	Leu	Pro	Arg	Val
		195					200					205			
Ala	Gly	Lys	Leu	Gly	Lys	Arg	Pro	Glu	Asp	Pro	Asn	Ala	Asp	Pro	Ser
	210					215					220				
Ser	Glu	Ala	Lys	Ala	Met	Ala	Val	Pro	Ile	Phe					

225

230

235

&lt;210&gt; 4275

&lt;211&gt; 874

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4275

atgcaggtgg ccctgggtgc acatctacga gatgccaggc gcgggcagag gctccgctca  
 60  
 ggggcgcacg tagtgggtcac tggaccccc aatgcgggca agagcagcct agtgaacctg  
 120  
 ctcagtcgga agcctgtgtc catcgtgtcc ccggagccag ggaccacccg tgacgtgctg  
 180  
 gagacccag tcgacctggc cggatttctt gtgctgctga gcgacacggc tgggttgcgg  
 240  
 gagggcgctgg gggccgtgga gcaggagggc gtgcggcgcg cccgggagag gctagagcag  
 300  
 gctgacctca ttctggccat gctggatgct tctgacctgg cctctccctc cagttgcaac  
 360  
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 420  
 ctctctctgg tgctgaacaa gtcggacctg ctgtccccgg agggcccagg tcccggctct  
 480  
 gacctgcccc cgcacctgct gctgtcctgt ctgacgggag aggggctgga cggcctctg  
 540  
 gaggcgctga ggaaggagct agctgcagtg tgtggggacc cgtccacaga tccccgctg  
 600  
 ctgacccgag caaggcacca gcaccacctc cagggttgcc tggatgccct cggccactac  
 660  
 aagcagtcaa aagacctggc cctggcgga gaggcgctgc ggggtggccc gggtcacctg  
 720  
 accgggctca caggtggagg ggggtaccgag gagatcctgg acatcatctt ccaggacttc  
 780  
 tgtgtgggca agtgacggga tccagggaaat tcgcacccaa gctgcgtgga gaccagggag  
 840  
 cctcggggga tctggaaaca gtttaggcca attg  
 874

&lt;210&gt; 4276

&lt;211&gt; 264

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4276

Met Gln Val Ala Leu Gly Ala His Leu Arg Asp Ala Arg Arg Gly Gln  
 1 5 10 15  
 Arg Leu Arg Ser Gly Ala His Val Val Val Thr Gly Pro Pro Asn Ala  
 20 25 30  
 Gly Lys Ser Ser Leu Val Asn Leu Leu Ser Arg Lys Pro Val Ser Ile  
 35 40 45  
 Val Ser Pro Glu Pro Gly Thr Thr Arg Asp Val Leu Glu Thr Pro Val  
 50 55 60  
 Asp Leu Ala Gly Phe Pro Val Leu Leu Ser Asp Thr Ala Gly Leu Arg

```

65          70          75          80
Glu Gly Val Gly Pro Val Glu Gln Glu Gly Val Arg Arg Ala Arg Glu
      85          90          95
Arg Leu Glu Gln Ala Asp Leu Ile Leu Ala Met Leu Asp Ala Ser Asp
      100         105         110
Leu Ala Ser Pro Ser Ser Cys Asn Phe Leu Ala Thr Val Val Ala Ser
      115         120         125
Val Gly Ala Gln Ser Pro Ser Asp Ser Ser Gln Arg Leu Leu Leu Val
      130         135         140
Leu Asn Lys Ser Asp Leu Leu Ser Pro Glu Gly Pro Gly Pro Gly Pro
145         150         155         160
Asp Leu Pro Pro His Leu Leu Leu Ser Cys Leu Thr Gly Glu Gly Leu
      165         170         175
Asp Gly Leu Leu Glu Ala Leu Arg Lys Glu Leu Ala Ala Val Cys Gly
      180         185         190
Asp Pro Ser Thr Asp Pro Pro Leu Leu Thr Arg Ala Arg His Gln His
      195         200         205
His Leu Gln Gly Cys Leu Asp Ala Leu Gly His Tyr Lys Gln Ser Lys
      210         215         220
Asp Leu Ala Leu Ala Ala Glu Ala Leu Arg Val Ala Arg Gly His Leu
225         230         235         240
Thr Arg Leu Thr Gly Gly Gly Gly Thr Glu Glu Ile Leu Asp Ile Ile
      245         250         255
Phe Gln Asp Phe Cys Val Gly Lys
      260

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&lt;210&gt; 4277

&lt;211&gt; 1070

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4277

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cggccggtcg ggccctcttt tgttttagga agggcacttc actccccggg cccccacctg
60
ccgcctcgcg ccgccccttt ccgcgggtcc ggagttggcg gggccctgcg ccggaggagg
120
aggaccaggc ccgcgggctc agctctcgcc gccagcgggc cgcagcattt ttgaaacgtt
180
ggggttggtg gagtgggttg attttccttg gaattgagtg agaaattcag aagactgaag
240
cccaggctta ctgtctacct ttcacggagg cctagccgtg agaggacaga agaaggcacg
300
tggcgaatca tgacagcgga caaagacaaa gacaaagaca aagagaagga ccgggaccga
360
gaccgggacc gagagagaga gaaaagagac aaagcaagag agagtgagaa ttcaaggcca
420
cgccggagct gtaccttggg aggaggagcc aaaaattatg ctgagagtga tcacagtga
480
gacgaggaca atgacaacaa tagtgccacc gcagaggagt ccacgaagaa gaataagaag
540
aaaccaccga aaaaaaagtc tcgttatgaa aggacagata ccggtgagat aacatcctac
600
atactgaag atgatgtggt ctacagacca ggagactgtg tgtatatcga gagtcggagg
660

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ccaaacacac cgtatttcat ctgtagcatt caagacttca aactggtcca caactcccag  
 720  
 gcctgttgca gatctccaac tcctgctttg tgtgaccccc cagcatgctc tctgccggtg  
 780  
 gcatacacagc caccacagca tctttctgaa gccgggagag ggcctgtagg gagtaagagg  
 840  
 gaccatctcc tcatgaacgt caaatgggtac taccgtcaat ctgagggtcc agattctgtg  
 900  
 tatcagcatt tggttcagga tcgacataat gaaaatgact ctggaagaga acttgtcatt  
 960  
 acagaccagc ttatcaagaa ccgagagctc ttcatttctg attacgttga cacttaccat  
 1020  
 gctgctgccc ttagagggaa gtgtaacatt ctccattttt ctgacatatt  
 1070

<210> 4278

<211> 253

<212> PRT

<213> Homo sapiens

<400> 4278

Met	Thr	Ala	Asp	Lys	Asp	Lys	Asp	Lys	Glu	Lys	Asp	Arg	Asp	1	5	10	15
Arg	Asp	Arg	Asp	Arg	Glu	Arg	Glu	Lys	Arg	Asp	Lys	Ala	Arg	20	25	30	
Glu	Asn	Ser	Arg	Pro	Arg	Arg	Ser	Cys	Thr	Leu	Glu	Gly	Gly	35	40	45	
Asn	Tyr	Ala	Glu	Ser	Asp	His	Ser	Glu	Asp	Glu	Asp	Asn	Asp	50	55	60	
Ser	Ala	Thr	Ala	Glu	Glu	Ser	Thr	Lys	Lys	Asn	Lys	Lys	Lys	65	70	75	80
Lys	Lys	Lys	Ser	Arg	Tyr	Glu	Arg	Thr	Asp	Thr	Gly	Glu	Ile	85	90	95	
Tyr	Ile	Thr	Glu	Asp	Asp	Val	Val	Tyr	Arg	Pro	Gly	Asp	Cys	100	105	110	
Ile	Glu	Ser	Arg	Arg	Pro	Asn	Thr	Pro	Tyr	Phe	Ile	Cys	Ser	115	120	125	
Asp	Phe	Lys	Leu	Val	His	Asn	Ser	Gln	Ala	Cys	Cys	Arg	Ser	130	135	140	
Pro	Ala	Leu	Cys	Asp	Pro	Pro	Ala	Cys	Ser	Leu	Pro	Val	Ala	145	150	155	160
Pro	Pro	Gln	His	Leu	Ser	Glu	Ala	Gly	Arg	Gly	Pro	Val	Gly	165	170	175	
Arg	Asp	His	Leu	Leu	Met	Asn	Val	Lys	Trp	Tyr	Tyr	Arg	Gln	180	185	190	
Val	Pro	Asp	Ser	Val	Tyr	Gln	His	Leu	Val	Gln	Asp	Arg	His	195	200	205	
Asn	Asp	Ser	Gly	Arg	Glu	Leu	Val	Ile	Thr	Asp	Pro	Val	Ile	210	215	220	
Arg	Glu	Leu	Phe	Ile	Ser	Asp	Tyr	Val	Asp	Thr	Tyr	His	Ala	225	230	235	240
Leu	Arg	Gly	Lys	Cys	Asn	Ile	Leu	His	Phe	Ser	Asp	Ile		245	250		

<210> 4279  
 <211> 1963  
 <212> DNA  
 <213> Homo sapiens

<400> 4279  
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 ctgagcgtac accagcagct gggcaagatg gtgggtgtgt ctgatgatgt caacgagtat  
 120  
 gcaatggccc tgagagacac cgaggacaag ctacgtcggg gccccaaagag gaggaaggac  
 180  
 atccttgca gattgaccaa gagccagaag gttttctcag aaaagctgga ccacctgagc  
 240  
 cgccgtcttg cctgggtcca tgccactgtc tactcccagg agaagatgct ggacatctac  
 300  
 tggctgctgc gcgtctgcct gcggaccatt gagcacgggt atcgcacagg gtctctcttt  
 360  
 gccttcacgc ccgagttcta cctgagcgtg gccatcaaca gctacagtgc tctcaagaat  
 420  
 tactttggtc ccgtgcacag catggaggag ctcccaggct atgaagagac cctgacccgc  
 480  
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 540  
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 600ccgaggagca gcgtatcgcc atggtgagga acctcctggc gccctatgag 660  
 cagcggccct gggcccagac caactggatc ctggtgcggc tctggagggg ctgtggcttc  
 720  
 gggtaaccgt atacacggct gccacatctg ctgaaaacca aacttgagga cgccaatttg  
 780  
 cccagcctcc agaagccctg cccttcacc ctgctgcagc agcacatggc ggacctccta  
 840  
 cagcagggtc ctgatgtggc acccagcttc ctcaacagcg tcctcaatca gctcaactgg  
 900  
 gccttctctg aattcattgg catgatccaa gagatccagc aggtctgtga gcgcctggag  
 960  
 cggaactttg tggacagccg gcagctcaag gtatgtgcca cctgctttga cctctcggtc  
 1020  
 agcctgctgc gtgtcttgga gatgactatc aactgggtgc ctgagatatt ccttgactgg  
 1080  
 acccgcccta cctctgagat gctgctgcgg cgtcttgac agctgctaaa ccagggtgctg  
 1140  
 aaccgggtga cagctgagag gaacctgttt gatcgtgtgg tcaccctacg gctgcctggc  
 1200  
 ctagagagcg tggaccacta tccattctg gtggcagtga cgggcatcct ggtgcagctc  
 1260  
 ctggtgcgtg gcccagcctc agagagagag caagccacat cagtgtcctt ggcagatccc  
 1320  
 tgcttccagc tacgtcaat atgctatctc ctgggacagc cagagcccc agcacctggc  
 1380  
 actgctctgc cagccctga ccggaagcgc ttctccctgc agagctatgc ggattatctc  
 1440  
 agtgccgatg agctggccca agtgaacag atgctggcgc acctgacctc tgcactctgc  
 1500

caggcagcag ctgcctccct gccaccagt gaggaggacc tctgccccat ctgctatgcc  
 1560  
 caccocatct ctgctgtgtt ccagcctgt ggccacaagt cctgcaaagc ctgtatcaac  
 1620  
 cagcacctga tgaacaacaa ggactgcttc ttctgcaaaa ccaccatcgt gtctgtagag  
 1680  
 gactgggaga agggagccaa tacgagtact acctcctcag ctgcctagcc ctcacagcct  
 1740  
 gtgccatcct ggaacctcca cctttgaacc cagagccagg ctggggcccta tttatgagct  
 1800  
 ccctttgccc ttctcctgta tcccacacca ccacatccaa cctccttgcc tgccctgtatc  
 1860  
 ctcattggtg ggagcccagc catggcccta attgtgcctg agcttgactt tcagtcaggg  
 1920  
 ccacagttag cattaaatta ttattccata caaaaaaaaaaaa aaa  
 1963

&lt;210&gt; 4280

&lt;211&gt; 575

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4280

Arg	Pro	Leu	Thr	Glu	Asn	Ser	Leu	Leu	Glu	Val	Leu	Asp	Gly	Thr	Val
1				5					10					15	
Met	Met	Tyr	Ser	Leu	Ser	Val	His	Gln	Gln	Leu	Gly	Lys	Met	Val	Gly
			20					25					30		
Val	Ser	Asp	Asp	Val	Asn	Glu	Tyr	Ala	Met	Ala	Leu	Arg	Asp	Thr	Glu
		35				40						45			
Asp	Lys	Leu	Arg	Arg	Cys	Pro	Lys	Arg	Arg	Lys	Asp	Ile	Leu	Ala	Glu
	50				55						60				
Leu	Thr	Lys	Ser	Gln	Lys	Val	Phe	Ser	Glu	Lys	Leu	Asp	His	Leu	Ser
65					70					75				80	
Arg	Arg	Leu	Ala	Trp	Val	His	Ala	Thr	Val	Tyr	Ser	Gln	Glu	Lys	Met
				85					90					95	
Leu	Asp	Ile	Tyr	Trp	Leu	Leu	Arg	Val	Cys	Leu	Arg	Thr	Ile	Glu	His
		100						105					110		
Gly	Asp	Arg	Thr	Gly	Ser	Leu	Phe	Ala	Phe	Met	Pro	Glu	Phe	Tyr	Leu
		115				120						125			
Ser	Val	Ala	Ile	Asn	Ser	Tyr	Ser	Ala	Leu	Lys	Asn	Tyr	Phe	Gly	Pro
		130				135					140				
Val	His	Ser	Met	Glu	Glu	Leu	Pro	Gly	Tyr	Glu	Glu	Thr	Leu	Thr	Arg
145					150					155				160	
Leu	Ala	Ala	Ile	Leu	Ala	Lys	His	Phe	Ala	Asp	Ala	Arg	Ile	Val	Gly
				165					170					175	
Thr	Asp	Ile	Arg	Asp	Ser	Leu	Met	Gln	Ala	Leu	Ala	Ser	Tyr	Val	Cys
		180						185					190		
Tyr	Pro	His	Ser	Leu	Arg	Ala	Val	Glu	Arg	Ile	Pro	Glu	Glu	Gln	Arg
		195				200						205			
Ile	Ala	Met	Val	Arg	Asn	Leu	Leu	Ala	Pro	Tyr	Glu	Gln	Arg	Pro	Trp
		210				215						220			
Ala	Gln	Thr	Asn	Trp	Ile	Leu	Val	Arg	Leu	Trp	Arg	Gly	Cys	Gly	Phe
225					230					235				240	
Gly	Tyr	Arg	Tyr	Thr	Arg	Leu	Pro	His	Leu	Leu	Lys	Thr	Lys	Leu	Glu



														245							250							255		
Asp	Ala	Asn	Leu	Pro	Ser	Leu	Gln	Lys	Pro	Cys	Pro	Ser	Thr	Leu	Leu															
														260							265							270		
Gln	Gln	His	Met	Ala	Asp	Leu	Leu	Gln	Gln	Gly	Pro	Asp	Val	Ala	Pro															
														275							280							285		
Ser	Phe	Leu	Asn	Ser	Val	Leu	Asn	Gln	Leu	Asn	Trp	Ala	Phe	Ser	Glu															
														290							295							300		
Phe	Ile	Gly	Met	Ile	Gln	Glu	Ile	Gln	Gln	Ala	Ala	Glu	Arg	Leu	Glu															
														305							310							315		
Arg	Asn	Phe	Val	Asp	Ser	Arg	Gln	Leu	Lys	Val	Cys	Ala	Thr	Cys	Phe															
														325							330							335		
Asp	Leu	Ser	Val	Ser	Leu	Leu	Arg	Val	Leu	Glu	Met	Thr	Ile	Thr	Leu															
														340							345							350		
Val	Pro	Glu	Ile	Phe	Leu	Asp	Trp	Thr	Arg	Pro	Thr	Ser	Glu	Met	Leu															
														355							360							365		
Leu	Arg	Arg	Leu	Ala	Gln	Leu	Leu	Asn	Gln	Val	Leu	Asn	Arg	Val	Thr															
														370							375							380		
Ala	Glu	Arg	Asn	Leu	Phe	Asp	Arg	Val	Val	Thr	Leu	Arg	Leu	Pro	Gly															
														385							390							395		
Leu	Glu	Ser	Val	Asp	His	Tyr	Pro	Ile	Leu	Val	Ala	Val	Thr	Gly	Ile															
														405							410							415		
Leu	Val	Gln	Leu	Leu	Val	Arg	Gly	Pro	Ala	Ser	Glu	Arg	Glu	Gln	Ala															
														420							425							430		
Thr	Ser	Val	Leu	Leu	Ala	Asp	Pro	Cys	Phe	Gln	Leu	Arg	Ser	Ile	Cys															
														435							440							445		
Tyr	Leu	Leu	Gly	Gln	Pro	Glu	Pro	Pro	Ala	Pro	Gly	Thr	Ala	Leu	Pro															
														450							455							460		
Ala	Pro	Asp	Arg	Lys	Arg	Phe	Ser	Leu	Gln	Ser	Tyr	Ala	Asp	Tyr	Ile															
														465							470							475		
Ser	Ala	Asp	Glu	Leu	Ala	Gln	Val	Glu	Gln	Met	Leu	Ala	His	Leu	Thr															
														485							490							495		
Ser	Ala	Ser	Ala	Gln	Ala	Ala	Ala	Ala	Ser	Leu	Pro	Thr	Ser	Glu	Glu															
														500							505							510		
Asp	Leu	Cys	Pro	Ile	Cys	Tyr	Ala	His	Pro	Ile	Ser	Ala	Val	Phe	Gln															
														515							520							525		
Pro	Cys	Gly	His	Lys	Ser	Cys	Lys	Ala	Cys	Ile	Asn	Gln	His	Leu	Met															
														530							535							540		
Asn	Asn	Lys	Asp	Cys	Phe	Phe	Cys	Lys	Thr	Thr	Ile	Val	Ser	Val	Glu															
														545							550							555		
Asp	Trp	Glu	Lys	Gly	Ala	Asn	Thr	Ser	Thr	Thr	Ser	Ser	Ala	Ala																
														565							570							575		

<210> 4281

<211> 507

<212> DNA

<213> Homo sapiens

<400> 4281

acgcgtgaag ggacagagct ggggccttgt caggagcccc acagttggcc aatggggccag  
60

atgccccata gtctcagccc acctctcttc tgccatgagt cccctgattc tgtcctttga  
120

gctgactctg agaggcagtg ggcttccgc cagcacctcc ccctatcaca tttgtagggc  
180

tggtttatga ggccggaagt aagcaagcac cccctcatat caacctggca cttcacaccc  
 240  
 cccatggtta tcagtggggg tgctggctgg ctggcaggca gccagagaca tttcagcagg  
 300  
 tcaggcatgg atgcagggtg aaatgagaga ggatcagtga gcgcattcat gtcttttgag  
 360  
 tgggtctacag atgagtggtc tccagtctca aatgaggaga acaaataaggg aagtaggagc  
 420  
 tcagggttct tgtgtgtctc ataggcagct gcctatccct gggtgataca gctccctggc  
 480  
 acacccattc ccaagggcac aggatcc  
 507

<210> 4282

<211> 106

<212> PRT

<213> Homo sapiens

<400> 4282

Met	Asn	Ala	Leu	Thr	Asp	Pro	Leu	Ser	Phe	Pro	Pro	Ala	Ser	Met	Pro
1				5					10					15	
Asp	Leu	Leu	Lys	Cys	Leu	Trp	Leu	Pro	Ala	Ser	Gln	Pro	Ala	Pro	Pro
			20					25					30		
Leu	Ile	Thr	Met	Gly	Gly	Val	Lys	Cys	Gln	Val	Asp	Met	Arg	Gly	Cys
		35					40					45			
Leu	Leu	Thr	Ser	Gly	Leu	Ile	Asn	Gln	Pro	Tyr	Lys	Cys	Asp	Arg	Gly
		50				55					60				
Arg	Cys	Trp	Arg	Glu	Ala	His	Cys	Leu	Ser	Glu	Ser	Ala	Gln	Arg	Thr
65					70					75				80	
Glu	Ser	Gly	Asp	Ser	Trp	Gln	Lys	Arg	Gly	Gly	Leu	Arg	Leu	Trp	Gly
			85					90						95	
Ile	Trp	Pro	Ile	Gly	Gln	Leu	Trp	Gly	Ser						
			100					105							

<210> 4283

<211> 315

<212> DNA

<213> Homo sapiens

<400> 4283

gaattctcaa ccagaacagc ccagcaggaa aggagccggc atgggggtgcc cctctgcagc  
 60  
 cgaccgtttt cctagaaggc ctaaccgctc aaacgggcag gggagggggg cgggcggccc  
 120  
 gggagaaacc gagtccccgc cgggtcccca ccgtgtggcg ccgaccgaaa taactccagt  
 180  
 ccagctgcaa aaaccctccc gaaaacccaa gcttgtccgg cacaacttcg gtctctccag  
 240  
 cctcattcct gcccgactc cgccaaactg ctccgcctgc ccagcgcagc ggatgcagcg  
 300  
 ctcccgcccc nacgg  
 315

<210> 4284

<211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 4284  
 Met Gly Cys Pro Ser Ala Ala Asp Arg Phe Pro Arg Arg Pro Asn Arg  
 1 5 10 15  
 Ser Asn Gly Gln Gly Arg Gly Ala Gly Gly Pro Gly Glu Thr Glu Ser  
 20 25 30  
 Pro Pro Gly Pro His Arg Val Ala Pro Thr Glu Ile Thr Pro Val Gln  
 35 40 45  
 Leu Gln Lys Pro Ser Arg Lys Pro Lys Leu Val Arg His Asn Phe Gly  
 50 55 60  
 Leu Ser Ser Leu Ile Pro Ala Arg Thr Pro Pro Asn Cys Ser Pro Cys  
 65 70 75 80  
 Pro Ala Gln Arg Met Gln Arg Ser Arg Pro Xaa  
 85 90

<210> 4285  
 <211> 591  
 <212> DNA  
 <213> Homo sapiens

<400> 4285  
 nagatctcag agaacttggt gaacattcag aaaatgcaga aaacgcaggt gaaatgccgc  
 60  
 aaaatcctga ccaagatgaa gcagcagggt catgagacag ccgcctgtcc ggagactgaa  
 120  
 gagataccgc agggagccag tggtctgtgg aaggatgacc tccagaagga actgagtgat  
 180  
 atatggtgat gccagcctg cagtctgacc cctgaccctc ctctgaaccc gttcccccaa  
 240  
 cgggatctgg cagtgaccac cagaacctgg agcccacctg agtccagact tccctcacc  
 300  
 cctaggactc accccaccac ggcccccaac cttagctgta ctgctgtcta caccctgagc  
 360  
 agtgtggagt ctcccagcgc cccagctcc ttgtcttctt gcaggctctgc tgtgcacgtg  
 420  
 ctgcaggact ccatagacag cctcactttg tgctcggggg cctgtcccaa ggcctcgagc  
 480  
 ctaagaggcc acaagggcac cagtgcctga gccctccact cccctcctgg gactctgact  
 540  
 ccgactgtga ccaggacctc tcccagccac ctttcagcaa gagcgggcgc a  
 591

<210> 4286  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 4286  
 Cys Pro Ala Cys Ser Leu Thr Pro Asp Pro Pro Leu Asn Pro Phe Pro  
 1 5 10 15  
 Gln Arg Asp Leu Ala Val Thr Thr Arg Thr Trp Ser Pro Pro Glu Ser

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<210> 4288
<211> 240
<212> PRT
<213> Homo sapiens
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&lt;400&gt; 4288

```

Met Arg Val Ala Thr Lys Ser Gly Arg Lys Arg Trp Leu Lys Ala Thr
 1           5           10           15
Thr Met Lys Asn Ser Val Arg Leu Val Ala Met Ala Pro Ser Pro Ala
 20           25           30
Leu Thr Ser Ile Ser Ser Glu Pro Ser Glu Ala Trp Val Gln Ala Phe
 35           40           45
Ala Ser Tyr Arg Met Ser Pro Gly Asn Trp Lys Thr Xaa Val Leu Ala
 50           55           60
Gln Thr Leu Val Glu Ala Leu Gln Leu Asp Pro Glu Thr Leu Ala Asn
 65           70           75           80
Glu Thr Ala Ala Arg Ala Ala Asn Val Ala Arg Ala Ala Ala Ser Asn
 85           90           95
Arg Ala Ala Arg Ala Ala Ala Ala Ala Arg Thr Ala Phe Ser Gln
 100          105          110
Val Val Ala Ser His Arg Val Ala Thr Pro Gln Val Ser Gly Glu Asp
 115          120          125
Thr Gln Pro Thr Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr Pro Glu
 130          135          140
Pro Pro Leu Ala Ser Pro Gln Thr Ser Gln Met Leu Val Thr Ser Lys
 145          150          155          160
Met Ala Ala Pro Glu Ala Pro Ala Thr Ser Ala Gln Ser Gln Thr Gly
 165          170          175
Ser Pro Ala Gln Glu Ala Ala Thr Glu Gly Pro Ser Ser Ala Cys Ala
 180          185          190
Phe Ser Gln Ala Pro Cys Ala Arg Glu Val Asp Ala Asn Arg Pro Ser
 195          200          205
Thr Ala Phe Leu Gly Gln Asn Asp Val Phe Asp Phe Thr Gln Pro Ala
 210          215          220
Val Ser Val Ala Trp Leu Pro Ala Pro Lys Arg Pro Ala Gln Pro Arg
 225          230          235          240

```

&lt;210&gt; 4289

&lt;211&gt; 353

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4289

```

ggatccctgg gaagatgact accctgctg tgcgggatat gagggagaaa tatgggagcc
 60
tcctcacttc aggtgtcact gctcagcata tatccaggct ttgttttcat attggtcttg
 120
caaagagcct tttgggaaca gttttcttat tgaaacatac tcagtgttta aacctgcagg
 180
tgtgggttgg tggcagtcca catggcatcc tttgctctgt ccctgttctc ctgtctctgg
 240
ctattcaggt tcccgtgagg atactgtcac ccttgaataa tggagcttgc ggaagaccaa
 300
gccctgttt ttggagtcct tgtgctgagg ccgctgtaac ttgcggagag ttg
 353

```

&lt;210&gt; 4290

&lt;211&gt; 113

&lt;212&gt; PRT

<213> Homo sapiens

<400> 4290

```

Met Thr Thr Leu Pro Val Arg Asp Met Arg Glu Lys Tyr Gly Ser Leu
 1           5           10           15
Leu Thr Ser Gly Val Thr Ala Gln His Ile Ser Arg Leu Cys Phe His
      20           25           30
Ile Gly Leu Ala Lys Ser Leu Leu Gly Thr Val Phe Leu Leu Lys His
      35           40           45
Thr Gln Cys Leu Asn Leu Gln Val Trp Val Gly Gly Ser Pro His Gly
      50           55           60
Ile Leu Cys Ser Val Pro Val Leu Leu Ser Leu Ala Ile Gln Val Pro
65           70           75           80
Val Arg Ile Leu Ser Pro Leu Asn Asn Gly Ala Cys Gly Arg Pro Ser
      85           90           95
Pro Cys Phe Trp Ser Pro Cys Ala Glu Ala Ala Val Thr Cys Gly Glu
      100          105          110
Leu

```

<210> 4291

<211> 517

<212> DNA

<213> Homo sapiens

<400> 4291

```

nnaaatttgc caagccaaga gttacccag gaagattctc tcttacatgg ccaattttca
60
caagcagtca ctcccctagc ccatcatcac acagattatt caaagccac cgatatctca
120
tggagagaca cactttctca gaagtttgga tcctcagatc acttggagaa actatttaag
180
atggatgaag caagtgccca gctccttgct tataaggaaa aaggccattc tcagagttca
240
caattttcct ctgatcaaga aatagctcat ctgctgcctg aaaatgtgag tgcgctccca
300
gctacggtgg cagttgcttc tccacatacc acctcggtta ctccaaagcc cgccaccctt
360
ctaccacca atgcttcagt gacaccttct gggacttccc agccacagct ggccaccaca
420
gtccacctg taaccactgt cacttctcag cctcccaaga cctcatttc tacagttttt
480
acacgggctg tggctacact ccaagcaatg gctacaa
517

```

<210> 4292

<211> 172

<212> PRT

<213> Homo sapiens

<400> 4292

```

Xaa Asn Leu Pro Ser Gln Glu Leu Pro Gln Glu Asp Ser Leu Leu His
 1           5           10           15
Gly Gln Phe Ser Gln Ala Val Thr Pro Leu Ala His His His Thr Asp

```

20							25					30				
Tyr	Ser	Lys	Pro	Thr	Asp	Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	
35							40					45				
Phe	Gly	Ser	Ser	Asp	His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	
50							55					60				
Ser	Ala	Gln	Leu	Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	
65	70							75					80			
Gln	Phe	Ser	Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	
85							90					95				
Ser	Ala	Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	
100							105					110				
Ala	Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	
115							120					125				
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	Val	
130							135					140				
Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	Val	Phe	
145	150							155					160			
Thr	Arg	Ala	Val	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr					
165							170									

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<210> 4293
<211> 547
<212> DNA
<213> Homo sapiens
```

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<400> 4293
gccggcgccc ccggcgcgga tgcctgctct gtgcctgtat ctgagatcat cgccgttgag
60
gaaacagacg ttcacgggaa acatcaaggc agtggaaaat ggcagaaaat ggaaaagcct
120
tacgctttta cagttcactg tgtaaagaga gcacgacggc accgctggaa gtgggcgag
180
gtgactttct ggtgtccaga ggagcagctg tgtcacttgt ggctgcagac cctgcgggag
240
atgctggaga agctgacgtc cagaccaaag catttactgg tatttatcaa cccgtttgga
300
ggaaaaggac aaggcaagcg gatatatgaa agaaaagtgg caccactgtt caccttagcc
360
tccatcacca ctgacatcat cgttactgaa catgctaatac aggccaagga gactctgtat
420
gagattaaca tagacaaata cgacggcatc gtctgtgtcg gcggagatgg tatgttcagc
480
gaggtgctgc acggtctgat tgggaggacg cagaggagcg ccggggtcga ccagaaccac
540
ccccggg
547

```

```
<210> 4294
<211> 182
<212> PRT
<213> Homo sapiens
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<400> 4294  
Ala Gly Ala Pro Gly Ala Asp Ala Cys Ser Val Pro Val Ser Glu Ile

```

      1           5           10           15
Ile Ala Val Glu Glu Thr Asp Val His Gly Lys His Gln Gly Ser Gly
      20           25           30
Lys Trp Gln Lys Met Glu Lys Pro Tyr Ala Phe Thr Val His Cys Val
      35           40           45
Lys Arg Ala Arg Arg His Arg Trp Lys Trp Ala Gln Val Thr Phe Trp
      50           55           60
Cys Pro Glu Glu Gln Leu Cys His Leu Trp Leu Gln Thr Leu Arg Glu
      65           70           75           80
Met Leu Glu Lys Leu Thr Ser Arg Pro Lys His Leu Leu Val Phe Ile
      85           90           95
Asn Pro Phe Gly Gly Lys Gly Gln Gly Lys Arg Ile Tyr Glu Arg Lys
      100           105           110
Val Ala Pro Leu Phe Thr Leu Ala Ser Ile Thr Thr Asp Ile Ile Val
      115           120           125
Thr Glu His Ala Asn Gln Ala Lys Glu Thr Leu Tyr Glu Ile Asn Ile
      130           135           140
Asp Lys Tyr Asp Gly Ile Val Cys Val Gly Gly Asp Gly Met Phe Ser
      145           150           155           160
Glu Val Leu His Gly Leu Ile Gly Arg Thr Gln Arg Ser Ala Gly Val
      165           170           175
Asp Gln Asn His Pro Arg
      180

```

&lt;210&gt; 4295

&lt;211&gt; 431

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4295

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nntctagaaa atcactgtct ccttctaccc tgccatctct acaccagggt tacaacaag
60
agccactgc tggctccttg ttttgtaa atagatttgtt ggactacagc tatgcccgta
120
catgtacatt ttgtgtatgg ctgcttttgt gccacaacag cagggttgag tattgcgaca
180
gagacccccca ttgccacaaa gcctaaaaca tttgccatcg agccctttaa gaaagagttt
240
gctggccgtg cgcggtggcc gtggctcccg cctgtaatcc cagcactttg gaaggctgag
300
gcaggcggtg aggtctggag ttcgaaacca gcctggccag cgtggcgaaa cctgtcttcc
360
ccctcccgaga ttcacgtgat tatccacact cagcctcctg agtacctggg actataggcg
420
cgtgccaacc a
431

```

&lt;210&gt; 4296

&lt;211&gt; 138

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4296

```

Xaa Leu Glu Asn His Cys Leu Leu Leu Pro Cys His Leu Tyr Thr Arg

```



1				5					10					15				
Val	Thr	Asn	Lys	Ser	Pro	Leu	Leu	Ala	Pro	Cys	Phe	Val	Asn	Lys	Ile			
			20					25					30					
Cys	Trp	Thr	Thr	Ala	Met	Pro	Val	His	Val	His	Phe	Val	Tyr	Gly	Cys			
		35					40					45						
Phe	Cys	Ala	Thr	Thr	Ala	Gly	Leu	Ser	Ile	Ala	Thr	Glu	Thr	Pro	Ile			
	50					55				60								
Ala	His	Lys	Pro	Lys	Thr	Phe	Ala	Ile	Glu	Pro	Phe	Lys	Lys	Glu	Phe			
65					70					75					80			
Ala	Gly	Arg	Ala	Arg	Trp	Pro	Trp	Leu	Pro	Pro	Val	Ile	Pro	Ala	Leu			
				85					90					95				
Trp	Lys	Ala	Glu	Ala	Gly	Gly	Glu	Val	Trp	Ser	Ser	Lys	Pro	Ala	Trp			
		100						105					110					
Pro	Ala	Trp	Arg	Asn	Pro	Val	Ser	Pro	Ser	Gln	Ile	His	Val	Ile	Ile			
		115					120					125						
Pro	Pro	Gln	Pro	Pro	Glu	Tyr	Leu	Gly	Leu									
	130						135											

&lt;210&gt; 4297

&lt;211&gt; 1668

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4297

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nccatggact cggcctttgt gggataaaag gtcaaccaag tgtcagctgc agttggaaaa
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900

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 1668

&lt;210&gt; 4298

&lt;211&gt; 411

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4298

Xaa	Met	Asp	Ser	Ala	Phe	Val	Gly	Ile	Lys	Val	Asn	Gln	Val	Ser	Ala	
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Ala	Val	Gly	Lys	Asp	Phe	Thr	Val	Ile	Pro	Ser	Lys	Leu	Ile	Gln	Phe	
		20						25				30				
Asp	Pro	Gly	Met	Ser	Thr	Lys	Met	Trp	Asn	Ile	Ala	Ile	Thr	Tyr	Asp	
		35					40					45				
Gly	Leu	Glu	Glu	Asp	Asp	Glu	Val	Phe	Glu	Val	Ile	Leu	Asn	Ser	Pro	
	50					55					60					
Val	Asn	Ala	Val	Leu	Gly	Thr	Lys	Thr	Lys	Ala	Ala	Val	Lys	Ile	Leu	
65					70					75				80		
Asp	Ser	Lys	Gly	Gly	Gln	Cys	His	Pro	Ser	Tyr	Ser	Ser	Asn	Gln	Ser	
			85					90					95			
Lys	His	Ser	Thr	Trp	Glu	Lys	Gly	Ile	Trp	His	Leu	Leu	Pro	Pro	Gly	
			100					105					110			
Ser	Ser	Ser	Ser	Thr	Thr	Ser	Gly	Ser	Phe	His	Leu	Glu	Arg	Arg	Pro	
		115					120					125				
Leu	Pro	Ser	Ser	Met	Gln	Leu	Ala	Val	Ile	Arg	Gly	Asp	Thr	Leu	Arg	
		130				135					140					
Gly	Phe	Asp	Ser	Thr	Asp	Leu	Ser	Gln	Arg	Lys	Leu	Arg	Thr	Arg	Gly	
145					150					155				160		
Asn	Gly	Lys	Thr	Val	Arg	Pro	Ser	Ser	Val	Tyr	Arg	Asn	Gly	Thr	Asp	

```

                165                170                175
Ile Ile Tyr Asn Tyr His Gly Ile Val Ser Leu Lys Leu Glu Asp Asp
                180                185                190
Ser Phe Pro Thr His Lys Arg Lys Ala Lys Val Ser Ile Ile Ser Gln
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Pro Gln Lys Thr Ile Lys Val Ala Glu Leu Pro Gln Ala Asp Lys Val
                210                215                220
Glu Ser Thr Thr Asp Ser His Phe Pro Arg Gln Asp Gln Leu Pro Ser
225                230                235                240
Phe Pro Lys Asn Cys Thr Leu Glu Leu Lys Gly Leu Phe His Phe Glu
                245                250                255
Glu Gly Ile Gln Lys Leu Tyr Gln Cys Asn Gly Ile Ala Trp Lys Ala
                260                265                270
Trp Ser Pro Gln Thr Lys Asp Val Glu Asp Lys Ser Cys Pro Ala Gly
                275                280                285
Trp His Gln His Ser Gly Tyr Cys His Ile Leu Ile Thr Glu Gln Lys
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Gly Thr Trp Asn Ala Ala Gln Ala Cys Arg Glu Gln Tyr Leu Gly
305                310                315                320
Asn Leu Val Thr Val Phe Ser Arg Gln His Met Arg Trp Leu Trp Asp
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Ile Gly Gly Arg Lys Ser Phe Trp Ile Gly Leu Asn Asp Gln Val His
                340                345                350
Ala Gly His Trp Glu Trp Ile Gly Gly Glu Pro Val Ala Phe Thr Asn
                355                360                365
Gly Arg Arg Gly Pro Ser Pro Arg Ser Lys Leu Gly Lys Ser Cys Val
370                375                380
Leu Val Gln Arg Gln Gly Lys Trp Gln Thr Lys Asp Cys Arg Arg Ala
385                390                395                400
Lys Pro His Asn Tyr Val Cys Ser Arg Lys Leu
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&lt;210&gt; 4299

&lt;211&gt; 988

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4299

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&lt;210&gt; 4300

&lt;211&gt; 84

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4300

Gly	Cys	Leu	Trp	Ser	Ser	Ala	Ala	Arg	Ala	Gln	Gln	Thr	Ile	Tyr	His
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Ser	Val	Pro	Ser	Gly	Gly	His	Pro	Ser	Ser	Ser	His	Trp	Leu	Pro	Ala
		20					25						30		
Val	Ser	Leu	Gln	Ser	Pro	Asp	Arg	Arg	Leu	Ser	His	Asp	Pro	Ala	Ala
		35					40					45			
Ser	Ser	Trp	Ser	Gly	Phe	Cys	Gly	Ile	Ser	Pro	Ala	Phe	Ser	Ala	Phe
	50					55				60					
Ser	Glu	Cys	Ser	Pro	Ser	Ser	Leu	Arg	Ser	His	Pro	Pro	Ala	Leu	Gly
65					70				75					80	
Ala	Ser	Asp	Arg												

&lt;210&gt; 4301

&lt;211&gt; 2429

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4301

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 2429

<210> 4302

<211> 717

<212> PRT

<213> Homo sapiens

<400> 4302

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Gly	Asn	Leu	Ala	His	Val	Glu	Lys	Val	Glu	Ser	Leu	Ser	Ser	Asp	Gly
			20					25					30		
Glu	Gly	Val	Gly	Gly	Ala	Ser	Ala	Leu	Thr	Ser	Gly	Ile	Ala	Ser	
		35				40					45				
Ser	Pro	Asp	Tyr	Glu	Phe	Asn	Val	Trp	Thr	Arg	Pro	Asp	Cys	Ala	Glu
	50					55				60					
Thr	Glu	Phe	Glu	Asn	Gly	Asn	Arg	Ser	Trp	Phe	Tyr	Phe	Ser	Val	Arg
65					70					75				80	
Gly	Gly	Met	Pro	Gly	Lys	Leu	Ile	Lys	Ile	Asn	Ile	Met	Asn	Met	Asn
			85					90					95		
Lys	Gln	Ser	Lys	Leu	Tyr	Ser	Gln	Gly	Met	Ala	Pro	Phe	Val	Arg	Thr
		100					105						110		
Leu	Pro	Thr	Arg	Pro	Arg	Trp	Glu	Arg	Ile	Arg	Asp	Arg	Pro	Thr	Phe
		115				120					125				
Glu	Met	Thr	Glu	Thr	Gln	Phe	Val	Leu	Ser	Phe	Val	His	Arg	Phe	Val
	130					135					140				
Glu	Gly	Arg	Gly	Ala	Thr	Thr	Phe	Phe	Ala	Phe	Cys	Tyr	Pro	Phe	Ser
145					150					155				160	
Tyr	Ser	Asp	Cys	Gln	Glu	Leu	Leu	Asn	Gln	Leu	Asp	Gln	Arg	Phe	Pro
			165					170					175		
Glu	Asn	His	Pro	Thr	His	Ser	Ser	Pro	Leu	Asp	Thr	Ile	Tyr	Tyr	His
		180					185					190			
Arg	Glu	Leu	Leu	Cys	Tyr	Ser	Leu	Asp	Gly	Leu	Arg	Val	Asp	Leu	Leu
		195				200						205			
Thr	Ile	Thr	Ser	Cys	His	Gly	Leu	Arg	Glu	Asp	Arg	Glu	Pro	Arg	Leu
	210					215					220				
Glu	Gln	Leu	Phe	Pro	Asp	Thr	Ser	Thr	Pro	Arg	Pro	Phe	Arg	Phe	Ala

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Gly	Lys	Arg	Ile	Phe	Phe	Leu	Ser	Ser	Arg	Val	His	Pro	Gly	Glu	Thr
				245					250					255	
Pro	Ser	Ser	Phe	Val	Phe	Asn	Gly	Phe	Leu	Asp	Phe	Ile	Leu	Arg	Pro
			260					265					270		
Asp	Asp	Pro	Arg	Ala	Gln	Thr	Leu	Arg	Arg	Leu	Phe	Val	Phe	Lys	Leu
		275					280					285			
Ile	Pro	Met	Leu	Asn	Pro	Asp	Gly	Val	Val	Arg	Gly	His	Tyr	Arg	Thr
	290					295					300				
Asp	Ser	Arg	Gly	Val	Asn	Leu	Asn	Arg	Gln	Tyr	Leu	Lys	Pro	Asp	Ala
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Val	Leu	His	Pro	Ala	Ile	Tyr	Gly	Ala	Lys	Ala	Val	Leu	Leu	Tyr	His
			325						330					335	
His	Val	His	Ser	Arg	Leu	Asn	Ser	Gln	Ser	Ser	Ser	Glu	His	Gln	Pro
			340					345					350		
Ser	Ser	Cys	Leu	Pro	Pro	Asp	Ala	Pro	Val	Ser	Asp	Leu	Glu	Lys	Ala
		355					360					365			
Asn	Asn	Leu	Gln	Asn	Glu	Ala	Gln	Cys	Gly	His	Ser	Ala	Asp	Arg	His
	370					375					380				
Asn	Ala	Glu	Ala	Trp	Lys	Gln	Thr	Glu	Pro	Ala	Glu	Gln	Lys	Leu	Asn
385					390					395					400
Ser	Val	Trp	Ile	Met	Pro	Gln	Gln	Ser	Ala	Gly	Leu	Glu	Glu	Ser	Ala
			405						410					415	
Pro	Asp	Thr	Ile	Pro	Pro	Lys	Glu	Ser	Gly	Val	Ala	Tyr	Tyr	Val	Asp
			420					425					430		
Leu	His	Gly	His	Ala	Ser	Lys	Arg	Gly	Cys	Phe	Met	Tyr	Gly	Asn	Ser
		435					440					445			
Phe	Ser	Asp	Glu	Ser	Thr	Gln	Val	Glu	Asn	Met	Leu	Tyr	Pro	Lys	Leu
	450					455					460				
Ile	Ser	Leu	Asn	Ser	Ala	His	Phe	Asp	Phe	Gln	Gly	Cys	Asn	Phe	Ser
465					470					475					480
Glu	Lys	Asn	Met	Tyr	Ala	Arg	Asp	Arg	Arg	Asp	Gly	Gln	Ser	Lys	Glu
			485						490					495	
Gly	Ser	Gly	Arg	Val	Ala	Ile	Tyr	Lys	Ala	Ser	Gly	Ile	Ile	His	Ser
			500					505					510		
Tyr	Thr	Leu	Glu	Cys	Asn	Tyr	Asn	Thr	Gly	Arg	Ser	Val	Asn	Ser	Ile
		515					520					525			
Pro	Ala	Ala	Cys	His	Asp	Asn	Gly	Arg	Ala	Ser	Pro	Pro	Pro	Pro	Pro
	530					535					540				
Ala	Phe	Pro	Ser	Arg	Tyr	Thr	Val	Glu	Leu	Phe	Glu	Gln	Val	Gly	Arg
545					550					555					560
Ala	Met	Ala	Ile	Ala	Ala	Leu	Asp	Met	Ala	Glu	Cys	Asn	Pro	Trp	Pro
			565						570					575	
Arg	Ile	Val	Leu	Ser	Glu	His	Ser	Ser	Leu	Thr	Asn	Leu	Arg	Ala	Trp

<b>&lt;400&gt; 4304</b>															
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Lys	Leu	Leu	Phe	Gln	Glu	Ala	His	Asn	Gly	Pro	Ala	Val	Glu	Ala	Gln
			20					25					30		
Glu	Glu	Glu	Glu	Glu	Gln	Asp	His	Gly	Val	Gly	Arg	Thr	Gly	Thr	Val
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Asn	Ser	Val	Gly	Ser	Asn	Gln	Ser	Ile	Pro	Ser	Met	Ser	Ile	Ser	Ala



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Ser Ser Val Ile His Leu Lys Pro Glu Glu Glu Asn Tyr Arg Glu Glu		
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Gly Asp Pro Arg Thr Arg Ala Ser Asp Pro Gln Ser Pro Pro Gln Val		
	115	120
Ser Arg His Lys Ser His Tyr Arg Asn Arg Glu His Phe Ala Thr Ile		
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Arg Thr Ala Ser Leu Val Thr Arg Gln Met Gln Glu His Glu Gln Asp		
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Ser Glu Leu Arg Glu Gln Met Ser Gly Tyr Lys Arg Met Arg Arg Gln		
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His Gln Lys Gln Leu Met Thr Leu Glu Asn Lys Leu Lys Ala Glu Met		
	180	185
Asp Glu His Arg Leu Arg Leu Asp Lys Asp Leu Glu Thr Gln Arg Asn		
	195	200
Asn Phe Ala Ala Glu Met Glu Lys Leu Ile Lys Lys His Gln Ala Ala		
	210	215
Met Glu Lys Glu Ala Lys Val Met Ser Asn Glu Glu Lys Lys Phe Gln		
	225	230
Gln His Ile Gln Ala Gln Gln Lys Lys Glu Leu Asn Ser Phe Leu Glu		
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		255

&lt;210&gt; 4305

&lt;211&gt; 3400

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4305

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&lt;210&gt; 4306

&lt;211&gt; 1052

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4306

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Leu	Ser	Cys	Leu	Ser	Arg	Leu	Arg	Thr	Leu	Asp	Val	Asp	His	Asn
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&lt;210&gt; 4307

&lt;211&gt; 947

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4307

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 Ser Cys Ser Cys Cys His Ala Ser Leu Cys Pro Ala Gly Gly Cys Gly  
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 Cys Gly Asp Cys Glu Gly Phe Asp Val His Ile Met Asp Asp Met Ile  
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 Lys Val Gly Arg Ala Thr Leu Cys Ile Val Pro Pro Thr Cys Ser Cys  
 115 120 125  
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 130 135 140  
 Val Gly Gly Ser Glu Val Arg Cys Cys His Phe Val Trp Phe Asn Met  
 145 150 155 160  
 Ser Ile Ala Trp Tyr Gln Pro Cys Ser Trp Leu Arg Ala Val Thr Leu  
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1928

&lt;210&gt; 4310



&lt;211&gt; 599

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4310

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Lys Asn His Met Ala Val His Tyr Asn Lys Ile Leu Ser Ala Lys Ala
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Ala Val Asp Cys Ser Val Pro Val Ser Val Ser Thr Ser Ile Lys Tyr
 65           70           75           80
Ala Asp Gln Gln Arg Arg Glu Lys Leu Lys Lys Glu Leu Ala Gln Cys
 85           90           95
Glu Lys Glu Phe Lys Leu Thr Lys Thr Ala Met Arg Ala Asn Tyr Lys
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Ser Phe Ala Arg Ser Leu Val Pro Ser Ser Glu Arg Leu His Leu Ser
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Ser Ser Ser Pro Ser Ser Val Asp Tyr Ala Ala Ser Gly Pro Arg Lys
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Ile Glu Ala Glu Thr Gln Thr Glu Leu Ser Phe Lys Ser Glu Leu Gly
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Ala Ser Asn Cys Val Thr Tyr Asp Ala Lys Glu Lys Ile Ala Pro Leu
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Pro Leu Glu Gly His Asp Ser Thr Trp Asp Glu Ile Lys Asp Asp Ala
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Leu Gln His Ser Ser Pro Arg Ala Met Cys Gln Tyr Ser Leu Lys Pro
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Pro Ser Thr Arg Lys Ile Tyr Ser Asp Glu Glu Glu Leu Leu Tyr Leu
355           360           365
Ser Phe Ile Glu Asp Val Thr Asp Glu Ile Leu Lys Leu Gly Leu Phe
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    405                                    410                                    415  
 Val Asp Leu Gly Cys Thr Ser Glu Glu Asn Ser Val Lys Gln Asn Asp  
    420                                    425                                    430  
 Val Asp Met Leu Asn Val Phe Asp Phe Glu Lys Ala Gly Asn Ser Glu  
    435                                    440                                    445  
 Pro Asn Glu Leu Lys Asn Glu Ser Glu Val Thr Ile Gln Gln Glu Arg  
    450                                    455                                    460  
 Gln Gln Tyr Gln Lys Ala Leu Asp Met Leu Leu Ser Ala Pro Lys Asp  
 465                                    470                                    475                                    480  
 Glu Asn Glu Ile Phe Pro Ser Pro Thr Glu Phe Phe Met Pro Ile Tyr  
    485                                    490                                    495  
 Lys Ser Lys His Ser Glu Gly Val Ile Ile Gln Gln Val Asn Asp Glu  
    500                                    505                                    510  
 Thr Asn Leu Glu Thr Ser Thr Leu Asp Glu Asn His Pro Ser Ile Ser  
    515                                    520                                    525  
 Asp Ser Leu Thr Asp Arg Glu Thr Ser Val Asn Val Ile Glu Gly Asp  
    530                                    535                                    540  
 Ser Asp Pro Glu Lys Val Glu Ile Ser Asn Gly Leu Cys Gly Leu Asn  
 545                                    550                                    555                                    560  
 Thr Ser Pro Ser Gln Ser Val Gln Phe Ser Ser Val Lys Gly Asp Asn  
    565                                    570                                    575  
 Asn His Asp Met Glu Leu Ser Thr Leu Lys Ile Met Glu Met Ser Ile  
    580                                    585                                    590  
 Glu Asp Cys Pro Leu Asp Val  
    595

&lt;210&gt; 4311

&lt;211&gt; 432

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4311

nnacgcgtga agggcattcg cccttggaat tgtcagcgat gttttgcaca ttatgatgtc  
 60  
 cagagcattt tgtttaatat caacgaagcc atggctacga gggctaattg ggggaaaagg  
 120  
 aaaaacataa cactggggc atctgcagca tccagactc agatgcctac gggccagaca  
 180  
 ggcaactgtg agtccccttt agggagcaag gaggacctca actccaaaga gaacctggat  
 240  
 gccgatgagg gagatgggaa aagtaacgac ctgcctccta gttgtcctta ctttagaaat  
 300  
 gagactggag gggaaggcga caggcggatt gcgctctctc gagccaactc atcctctttc  
 360  
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 420  
 gtctccgtct tg  
 432

&lt;210&gt; 4312

&lt;211&gt; 144

&lt;212&gt; PRT

<213> Homo sapiens

<400> 4312

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Xaa Arg Val Lys Gly Ile Arg Pro Trp Asn Cys Gln Arg Cys Phe Ala
 1           5           10          15
His Tyr Asp Val Gln Ser Ile Leu Phe Asn Ile Asn Glu Ala Met Ala
          20          25          30
Thr Arg Ala Asn Val Gly Lys Arg Lys Asn Ile Thr Thr Gly Ala Ser
          35          40          45
Ala Ala Ser Gln Thr Gln Met Pro Thr Gly Gln Thr Gly Asn Cys Glu
          50          55          60
Ser Pro Leu Gly Ser Lys Glu Asp Leu Asn Ser Lys Glu Asn Leu Asp
          65          70          75          80
Ala Asp Glu Gly Asp Gly Lys Ser Asn Asp Leu Val Leu Ser Cys Pro
          85          90          95
Tyr Phe Arg Asn Glu Thr Gly Gly Glu Gly Asp Arg Arg Ile Ala Leu
          100         105         110
Ser Arg Ala Asn Ser Ser Ser Phe Ser Ser Gly Glu Ser Cys Ser Phe
          115         120         125
Glu Ser Ser Leu Ser Ser His Cys Thr Asn Ala Gly Val Ser Val Leu
          130         135         140

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<210> 4313

<211> 936

<212> DNA

<213> Homo sapiens

<400> 4313

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120
attcagtatc caaccatcct ctccattctc ctctggacct caccactctc agagctgctt
180
gtcctggcag aatctacagt tcaccccaac tctatgcctt acccctccca acccaacage
240
atttgcatgt tgcaaaatat acagacccaa gtccctgaggg gactgaggac atgatgctgg
300
gcccaagtct cctgctcagg gcttctctcc aatgccagcc ctgccactcc ttcctcacc
360
tccttggagc ctctctgct gcttgtctat cccaacggcc ctgctccctt cccttcctgc
420
ccttcaccag ctttctggga caccatgccc tgaggaaggg acctttgggt ttctctaaac
480
atctttgaag ggctgaggca gtcagggctg gctgccttgt cactctttat ttggaagcca
540
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600
gggcagatgt cttcacttct cctaccttcc cagtcttgtg atcctgtgat gagcaccagg
660
atggccctgt ggtccctaga gcacccctca tgcctgtaggg tctgcagcc ccaccccttc
720
tctactgggc cctggtatcc tggctcctct ctcagctctg ccactgatct ctgtgcctta
780

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gtttacttct ctgcacgggg gactcacccc aagaccattt ccagcagctt cccaggtgat  
 840  
 gtggtgcccc aaggctgggc ttgcagctg tggcccagct ccttagtgct gccaggaga  
 900  
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 936

<210> 4314  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

<400> 4314  
 Met Ser Ser Leu Leu Leu Pro Ser Gln Ser Cys Asp Pro Val Met Ser  
 1 5 10 15  
 Thr Arg Met Ala Leu Trp Ser Leu Glu His Pro Ser Cys Cys Arg Val  
 20 25 30  
 Leu Gln Pro His Pro Phe Ser Thr Gly Pro Trp Tyr Pro Gly Ser Ser  
 35 40 45  
 Leu Ser Ser Ala Thr Asp Leu Cys Ala Leu Val Tyr Phe Ser Ala Arg  
 50 55 60  
 Gly Thr His Pro Lys Thr Ile Ser Ser Ser Phe Pro Gly Asp Val Val  
 65 70 75 80  
 Pro Gln Gly Trp Ala Leu Gln Leu Trp Pro Ser Ser Leu Val Leu Pro  
 85 90 95  
 Arg Arg His Gln Ala Ala Gln Asn Glu Val Thr Ala Gly Asn  
 100 105 110

<210> 4315  
 <211> 573  
 <212> DNA  
 <213> Homo sapiens

<400> 4315  
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 cagagcgatg accatgtgaa gacacaggga agagatggcc acctaccacc acgcatggt  
 120  
 cacctaccat ccaagccatg gtcaccttca ccaagccaca gtcacttacc atccaagcca  
 180  
 ccgtcaccta ccatccaagc catggccacc tacctgccaa gccatggcca cctaccgcc  
 240  
 aagccatggt cacctacca ccaagtcatt gtcgcctacc atccaaggag caggcctgga  
 300  
 acagatcctt cccagagcc ctcaatagga gccaaccctg ctgacacctt gatctcagac  
 360  
 ttcaagcctc cagaactgtg ggacaatcct tcaatgtcat ttaatccacc cagcatgtgg  
 420  
 tctcttgta cagttgcatt agccagtga cctaccggg cccttctgca gtcgcctggc  
 480  
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 agaccgagg gagatatttg ggaaacaaga tgg  
 573

<210> 4316  
 <211> 169  
 <212> PRT  
 <213> Homo sapiens

<400> 4316  
 Xaa Leu Ile Gln Tyr Asp Trp Cys Pro Tyr Lys Lys Arg Lys Leu Gly  
 1 5 10 15  
 His Arg Gln Ala Gln Ser Asp Asp His Val Lys Thr Gln Gly Arg Asp  
 20 25 30  
 Gly His Leu Pro Pro Arg His Gly His Leu Pro Ser Lys Pro Trp Ser  
 35 40 45  
 Pro Ser Pro Ser His Ser His Leu Pro Ser Lys Pro Pro Ser Pro Thr  
 50 55 60  
 Ile Gln Ala Met Ala Thr Tyr Leu Pro Ser His Gly His Leu Pro Ala  
 65 70 75 80  
 Lys Pro Trp Ser Pro Thr His Gln Val Met Val Ala Tyr His Pro Arg  
 85 90 95  
 Ser Arg Pro Gly Thr Asp Pro Ser Pro Glu Pro Ser Val Gly Ala Asn  
 100 105 110  
 Pro Ala Asp Thr Leu Ile Ser Asp Phe Lys Pro Pro Glu Leu Trp Asp  
 115 120 125  
 Asn Pro Ser Leu Ser Phe Asn Pro Pro Ser Met Trp Ser Leu Val Thr  
 130 135 140  
 Val Ala Leu Ala Ser Glu Pro Thr Arg Ala Leu Leu Gln Ser Pro Gly  
 145 150 155 160  
 Ser Gly Val Val Leu Val Arg Lys Phe  
 165

<210> 4317  
 <211> 744  
 <212> DNA  
 <213> Homo sapiens

<400> 4317  
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 tcccatgccc aaaacataact ccagatattt aatgaatttc gtgatagccc cttattcaca  
 120  
 gatgttatca tttgggtgga aggaaaagaa tttccttgcc atagagctgt gctctcagcc  
 180  
 ttagcagct acttcagagc tatgttttgt aatgaccaca gggaaagccg agaaatgttg  
 240  
 gttgagatca atggtatttt agctgaagct atggaatggt ttttgagta tgtttatact  
 300  
 ggaaagggtga agatcactac agagaatgta cagtatctct ttgagacatc aagcctcttt  
 360  
 cagattagtg ttctccgtga tgcacgtgcc aagttcttgg aggagcaact tgatccttgt  
 420  
 aattgcttag gaatccagcg ctttctgat acccattcac tcaaaacact cttcacaaaa  
 480  
 tgcaaaaatt ttgcgttaca gacttttgag gatgtatccc agcacgaaga atttcttgag  
 540

cttgacaaag atgaacttat tgattatatt tgtagtgatg aacttgttat tggtaaagag  
 600  
 gagatgggttt ttgaagccgt catgcgttgg gtctatcgtg ccgttgatct gagaagacca  
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 720  
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<210> 4318

<211> 239

<212> PRT

<213> Homo sapiens

<400> 4318

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Ile	Leu	Gln	Ile	Phe	Asn	Glu	Phe	Arg	Asp	Ser	Arg	Leu	Phe	Thr	Asp
		20						25				30			
Val	Ile	Ile	Trp	Val	Glu	Gly	Lys	Glu	Phe	Pro	Cys	His	Arg	Ala	Val
	35						40					45			
Leu	Ser	Ala	Cys	Ser	Ser	Tyr	Phe	Arg	Ala	Met	Phe	Cys	Asn	Asp	His
	50					55					60				
Arg	Glu	Ser	Arg	Glu	Met	Leu	Val	Glu	Ile	Asn	Gly	Ile	Leu	Ala	Glu
65					70					75				80	
Ala	Met	Glu	Cys	Phe	Leu	Gln	Tyr	Val	Tyr	Thr	Gly	Lys	Val	Lys	Ile
				85						90				95	
Thr	Thr	Glu	Asn	Val	Gln	Tyr	Leu	Phe	Glu	Thr	Ser	Ser	Leu	Phe	Gln
			100					105					110		
Ile	Ser	Val	Leu	Arg	Asp	Ala	Cys	Ala	Lys	Phe	Leu	Glu	Glu	Gln	Leu
	115						120					125			
Asp	Pro	Cys	Asn	Cys	Leu	Gly	Ile	Gln	Arg	Phe	Ala	Asp	Thr	His	Ser
	130					135					140				
Leu	Lys	Thr	Leu	Phe	Thr	Lys	Cys	Lys	Asn	Phe	Ala	Leu	Gln	Thr	Phe
145					150					155				160	
Glu	Asp	Val	Ser	Gln	His	Glu	Glu	Phe	Leu	Glu	Leu	Asp	Lys	Asp	Glu
				165					170				175		
Leu	Ile	Asp	Tyr	Ile	Cys	Ser	Asp	Glu	Leu	Val	Ile	Gly	Lys	Glu	Glu
		180						185				190			
Met	Val	Phe	Glu	Ala	Val	Met	Arg	Trp	Val	Tyr	Arg	Ala	Val	Asp	Leu
	195						200					205			
Arg	Arg	Pro	Leu	Leu	His	Glu	Leu	Leu	Thr	His	Val	Arg	Leu	Pro	Leu
	210					215					220				
Leu	His	Pro	Asn	Tyr	Phe	Val	Gln	Thr	Val	Glu	Val	Asp	Gln	Leu	
225					230					235					

<210> 4319

<211> 388

<212> DNA

<213> Homo sapiens

<400> 4319

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120  
gcagtgcgcaa gtgactcttg caataatagc atctcactcc tatctgaaaa gttgacaagc  
180  
agctgttccc cccatcatat caagagaagt gtagtggaag ctatgcaacg ccaagctcgg  
240  
aaaatgtgca attacgacaa aatcttg gcc acaaagaaaa acctagacca tgtcaataaa  
300  
atcttaaaag ccaaaaaact tcaaaggcag gccaggacag ggaataactt tgtgaaacgt  
360  
aggccaggtc gaccgcggtc ggagagag  
388

<210> 4320  
<211> 129  
<212> PRT  
<213> Homo sapiens

<400> 4320  
Xaa Met Glu Lys Ser Ile Asp Ala Val Ile Ala Thr Ala Ser Ala Pro  
1 5 10 15  
Pro Ser Ser Ser Pro Gly Arg Ser His Ser Lys Asp Arg Thr Leu Gly  
20 25 30  
Lys Pro Asp Ser Leu Leu Val Pro Ala Val Ala Ser Asp Ser Cys Asn  
35 40 45  
Asn Ser Ile Ser Leu Leu Ser Glu Lys Leu Thr Ser Ser Cys Ser Pro  
50 55 60  
His His Ile Lys Arg Ser Val Val Glu Ala Met Gln Arg Gln Ala Arg  
65 70 75 80  
Lys Met Cys Asn Tyr Asp Lys Ile Leu Ala Thr Lys Lys Asn Leu Asp  
85 90 95  
His Val Asn Lys Ile Leu Lys Ala Lys Lys Leu Gln Arg Gln Ala Arg  
100 105 110  
Thr Gly Asn Asn Phe Val Lys Arg Pro Gly Arg Pro Arg Ser Glu  
115 120 125  
Arg

<210> 4321  
<211> 278  
<212> DNA  
<213> Homo sapiens

<400> 4321  
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gaccaggctc cttggtgaga agaccaccac agcggcaggg tccagccaca gcaggcccgg  
120  
cgtcccgggtg gaaggcagcc ctgggcggaa cccaggcggt taacgggtca ctaggcagcc  
180  
ccagatctgg ggaacagatg agcacgtggg gagctggagt gagctgagca gaagttttgt  
240  
gcccgcctgc ccccatcccc tccagccac gttttaga  
278

<210> 4322  
 <211> 85  
 <212> PRT  
 <213> Homo sapiens

<400> 4322  
 Met Gly Ala Gly Gly His Lys Thr Ser Ala Gln Leu Thr Pro Ala Pro  
 1 5 10 15  
 His Val Leu Ile Cys Ser Pro Asp Leu Gly Leu Pro Ser Glu Pro Leu  
 20 25 30  
 Asn Ala Trp Val Pro Pro Arg Ala Ala Phe His Arg Asp Ala Gly Pro  
 35 40 45  
 Ala Val Ala Gly Pro Cys Arg Cys Gly Gly Leu Leu Thr Lys Glu Pro  
 50 55 60  
 Gly Leu Ala Ala Trp Asn Asn Leu Gln Val Gly Val Leu Arg Gly Leu  
 65 70 75 80  
 Trp Gln Val Leu Gly  
 85

<210> 4323  
 <211> 1542  
 <212> DNA  
 <213> Homo sapiens

<400> 4323  
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 120  
 gacgagaaga ttgaggtgga tgacccccct gacaaggagg acatgcatc aagcttcagg  
 180  
 tcgaatgtgt tgacgggggc ggctccccag caggactacg ataagctgaa ggcactcgga  
 240  
 ggggaaaact ccagcaaaac tggactctct acgtcaggca atgtggagaa aaacaaagct  
 300  
 gttaagagag aacagaagc cagttctata aacctgagtg tttatgaacc ttttaaagtc  
 360  
 agaaaagcag.aggataaatt gaaggaaagc tctgacaagg tgctggaaaa cagagtccta  
 420  
 gatgggaagc tgagctccga gaagaatgac accagcctcc ccagcgttgc gccatcaaag  
 480  
 acaaagtcgt cctccaagct ctgcctctgc atcgctgcca tcgcggtct cagcgctaaa  
 540  
 aaggcggtt cagactctg caaagaacca gtggccaatt cgagggaatc ctccccgtta  
 600  
 ccaaagaag taaatgacag tccgagagcc gctgacaagt ctctgaatc ccagaatctc  
 660  
 atcgacggga ccaaaaaacc atccctgaag caaccggata gtcccagaag catctcaagt  
 720  
 gagaacagca gcaaaggatc cccgtcctct cccgcggggt ccacaccagc aatccccaaa  
 780  
 gtccgcataa aaaccattaa gacatcttct ggggaaatca agagaacagt gaccagggtta  
 840



ttgccagaag tggatcttga ctctggaaag aaaccttccg agcagacagc gtccgtcatg  
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 gcctctgtga cateccttct gtcgtctcca gcatcagccg ccgtcctttc ctctcccccc  
 960  
 agggcgcttc tccagtctgc ggtcgtgacc aatgcagttt ccctgcaga gctcaccccc  
 1020  
 aaacaggtca caatcaagcc tgtggctact gctttcctcc cagtgtctgc tgtgaagacg  
 1080  
 gcaggatccc aagtcattaa tttgaagctc gctaacaaca ccacggtgaa agccacggtc  
 1140  
 atatctgctg cctctgtcca gagtgccagc agcgccatca ttaaagctgc caacgccatc  
 1200  
 cagcagcaaa ctgtcgtggt gccggcatcc agcctggcca atgccaaact cgtgccaaag  
 1260  
 actgtgcacc ttgccaacct taaccttttg cctcaggggtg cccaggccac ctctgaactc  
 1320  
 cgccaagtgc taaccaaacc tcagcaacaa ataaagcagg caataatcaa tgcagcagcc  
 1380  
 tcgcaacccc caaaaaaggt gtctcgagtc caggtgggtg cgtccttgca gagttctgtg  
 1440  
 gtggaagctt tcaacaaggt gctgagcagt gtcaatccag tccctgttta catcccaaac  
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 1542

<210> 4324

<211> 514

<212> PRT

<213> Homo sapiens

<400> 4324

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Ser	Glu	Val	Thr	Leu	Lys	Asp	Ser	Thr	Phe	Ser	Gln	Phe	Ser	Pro	Ile
		20					25				30				
Ser	Ser	Ala	Glu	Glu	Phe	Asp	Asp	Asp	Glu	Lys	Ile	Glu	Val	Asp	Asp
		35				40					45				
Pro	Pro	Asp	Lys	Glu	Asp	Met	Arg	Ser	Ser	Phe	Arg	Ser	Asn	Val	Leu
		50				55				60					
Thr	Gly	Ser	Ala	Pro	Gln	Gln	Asp	Tyr	Asp	Lys	Leu	Lys	Ala	Leu	Gly
65					70				75					80	
Gly	Glu	Asn	Ser	Ser	Lys	Thr	Gly	Leu	Ser	Thr	Ser	Gly	Asn	Val	Glu
			85					90					95		
Lys	Asn	Lys	Ala	Val	Lys	Arg	Glu	Thr	Glu	Ala	Ser	Ser	Ile	Asn	Leu
			100					105					110		
Ser	Val	Tyr	Glu	Pro	Phe	Lys	Val	Arg	Lys	Ala	Glu	Asp	Lys	Leu	Lys
		115				120					125				
Glu	Ser	Ser	Asp	Lys	Val	Leu	Glu	Asn	Arg	Val	Leu	Asp	Gly	Lys	Leu
		130				135					140				
Ser	Ser	Glu	Lys	Asn	Asp	Thr	Ser	Leu	Pro	Ser	Val	Ala	Pro	Ser	Lys
145					150				155					160	
Thr	Lys	Ser	Ser	Ser	Lys	Leu	Ser	Ser	Cys	Ile	Ala	Ala	Ile	Ala	Ala
			165					170					175		
Leu	Ser	Ala	Lys	Lys	Ala	Ala	Ser	Asp	Ser	Cys	Lys	Glu	Pro	Val	Ala

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<210> 4325
<211> 1405
<212> DNA
<213> Homo sapiens
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3518

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 240  
 cgccagctcc tccttggcct ttgaggacag actcgatgtc ctagatgtcc acgaggtggg  
 300  
 gtgtctgcct gtgttgaggg tgcggtgccc tgagtgatgt tttttctccc ccaggtgctc  
 360  
 ttggcgtggt ctggggggcc ttcgtccagc tccatggtct ggaggttct tgagggcctg  
 420  
 agccaagatt ctgccaaaag actgcgcttt gtggcaggag tcatctttgt tgacgagggg  
 480  
 gcagcctgtg gccagagcct agaggagaga tcaaagacc tggccgaagt gaagccatt  
 540  
 ctgcaagcaa ctgggttccc atggcatgtg gtggccttag aggaggtgtt cagcctgcca  
 600  
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 660  
 gccgtggaca gcttctcca gcagcagtat gtgctggggg ccgggggtgg tcctggcccc  
 720  
 actcaagggg aggaacagcc accccagccc ccgctggacc ccagaaacct ggcaagaccg  
 780  
 cctgcccctg cccagactga ggctctttcc caactgttct gctcagttag gacactgact  
 840  
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 960  
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 1200  
 ttcccctcca ctgtcagcac tgtgtacagg tgtgtgtggg tgtgtgcggg ggggtgcggg  
 1260  
 gtgtgtgctg tgtgcgggtg tgtgcgggtg gtgagctcac cactcgtgct caggccaggg  
 1320  
 cttaggggtg agccccagcc cgtgtgattc acctgctcct ccacaaatcc ggccacagga  
 1380  
 caagtgagaa gcttgtgaag ggccc  
 1405

&lt;210&gt; 4326

&lt;211&gt; 336

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4326

Met Phe Phe Leu Pro Gln Val Leu Leu Ala Trp Ser Gly Gly Pro Ser  
 1 5 10 15  
 Ser Ser Ser Met Val Trp Gln Val Leu Glu Gly Leu Ser Gln Asp Ser

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                20                25                30
Ala Lys Arg Leu Arg Phe Val Ala Gly Val Ile Phe Val Asp Glu Gly
      35                40                45
Ala Ala Cys Gly Gln Ser Leu Glu Glu Arg Ser Lys Thr Leu Ala Glu
      50                55                60
Val Lys Pro Ile Leu Gln Ala Thr Gly Phe Pro Trp His Val Val Ala
      65                70                75                80
Leu Glu Glu Val Phe Ser Leu Pro Pro Ser Val Leu Trp Cys Ser Ala
      85                90                95
Gln Glu Leu Val Gly Ser Glu Gly Ala Tyr Lys Ala Ala Val Asp Ser
      100                105                110
Phe Leu Gln Gln Gln Tyr Val Leu Gly Ala Gly Gly Gly Pro Gly Pro
      115                120                125
Thr Gln Gly Glu Glu Gln Pro Gln Pro Pro Leu Asp Pro Gln Asn
      130                135                140
Leu Ala Arg Pro Pro Ala Pro Ala Gln Thr Glu Ala Leu Ser Gln Leu
      145                150                155                160
Phe Cys Ser Val Arg Thr Leu Thr Ala Lys Glu Glu Leu Leu Gln Thr
      165                170                175
Leu Arg Thr His Leu Ile Leu His Met Ala Arg Ala His Gly Tyr Ser
      180                185                190
Lys Val Met Thr Gly Asp Ser Cys Thr Arg Leu Ala Ile Lys Leu Met
      195                200                205
Thr Asn Leu Ala Leu Gly Arg Gly Ala Phe Leu Ala Trp Asp Thr Gly
      210                215                220
Phe Ser Asp Glu Arg His Gly Asp Val Val Val Val Arg Pro Met Arg
      225                230                235                240
Asp His Thr Leu Lys Glu Val Ala Phe Tyr Asn Arg Leu Phe Ser Val
      245                250                255
Pro Ser Val Phe Thr Pro Ala Val Asp Thr Lys Ala Pro Glu Lys Ala
      260                265                270
Ser Ile His Arg Leu Met Glu Ala Phe Ile Leu Arg Leu Gln Thr Gln
      275                280                285
Phe Pro Ser Thr Val Ser Thr Val Tyr Arg Cys Val Trp Val Cys Ala
      290                295                300
Gly Gly Ala Arg Val Cys Ala Val Cys Gly Cys Val Arg Val Val Ser
      305                310                315                320
Ser Pro Leu Val Leu Arg Pro Gly Leu Arg Val Glu Pro Gln Pro Val
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&lt;210&gt; 4327

&lt;211&gt; 551

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4327

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<210> 4328

<211> 107

<212> PRT

<213> Homo sapiens

<400> 4328

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Val	Thr	Leu	Leu	Ser	Gln	Arg	Trp	Val	Cys	Pro	Ile	Val	Val	Ser	Arg
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		35				40					45				
His	Leu	Asp	Gly	Leu	Arg	Val	Arg	Ala	Lys	Val	Arg	Arg	Pro	Gly	His
	50				55					60					
His	Thr	Ile	Pro	Ala	Thr	Thr	Arg	Trp	Leu	Phe	Leu	Glu	Ser	Glu	Gly
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Gly	Arg	Arg	Cys	Leu	Gly	Ser	Trp	Gly	Cys	Leu	Gly	Ser	Glu	Pro	Val
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<210> 4329

<211> 3192

<212> DNA

<213> Homo sapiens

<400> 4329

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<210> 4330

<211> 371

<212> PRT

<213> Homo sapiens

<400> 4330

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			20					25					30		
Ser	Arg	Ser	Pro	Gln	Arg	Ser	Pro	Leu	Gln	Ser	Ala	Glu	Ser	Ser	Pro
		35					40				45				
Thr	Ala	Gly	Lys	Lys	Leu	Pro	Glu	Val	Pro	Pro	Ser	Glu	Glu	Glu	Glu

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 Gln Glu Ala Trp Val Asn Ala Leu Leu Gly Arg Ile Phe Trp Asp Phe  
 65                      70                      75                      80  
 Leu Gly Glu Lys Tyr Trp Ser Asp Leu Val Ser Lys Lys Ile Gln Met  
                     85                      90                      95  
 Lys Leu Ser Lys Ile Lys Leu Pro Tyr Phe Met Asn Glu Leu Thr Leu  
                     100                      105                      110  
 Thr Glu Leu Asp Met Gly Val Ala Val Pro Lys Ile Leu Gln Ala Phe  
                     115                      120                      125  
 Lys Pro Tyr Val Asp His Gln Gly Leu Trp Ile Asp Leu Glu Met Ser  
                     130                      135                      140  
 Tyr Asn Gly Ser Phe Leu Met Thr Leu Glu Thr Lys Met Asn Leu Pro  
 145                      150                      155                      160  
 Lys Leu Gly Lys Glu Pro Leu Val Glu Ala Leu Lys Val Gly Glu Ile  
                     165                      170                      175  
 Gly Lys Glu Gly Cys Arg Pro Arg Ala Phe Cys Leu Ala Asp Ser Asp  
                     180                      185                      190  
 Glu Glu Ser Ser Ala Gly Ser Ser Glu Glu Asp Asp Ala Pro Glu  
                     195                      200                      205  
 Pro Ala Gly Glu Thr Asn Ser Ser Ser Gln Gly Glu Gly Tyr Val Gly  
                     210                      215                      220  
 Gly His Arg Thr Ser Lys Ile Met Arg Phe Val Asp Lys Ile Thr Lys  
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 Ser Lys Tyr Phe Gln Lys Ala Thr Glu Thr Glu Phe Ile Lys Arg Xaa  
                     245                      250                      255  
 Ile Glu Glu Val Ser Asn Thr Pro Leu Leu Thr Val Glu Val Gln  
                     260                      265                      270  
 Glu Cys Arg Gly Thr Leu Ala Val Asn Ile Pro Pro Pro Pro Thr Asp  
                     275                      280                      285  
 Arg Val Trp Tyr Gly Phe Arg Lys Pro Pro His Val Glu Leu Lys Ala  
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 Arg Pro Lys Leu Gly Glu Arg Glu Val Thr Leu Val His Val Thr Asp  
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 Trp Ile Glu Lys Lys Leu Glu Gln Glu Phe Gln Lys Val Phe Val Met  
                     325                      330                      335  
 Pro Asn Met Asp Asp Val Tyr Ile Thr Ile Met His Ser Ala Met Asp  
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&lt;210&gt; 4331

&lt;211&gt; 1355

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4331

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120

gattttaaag agccttttgca cctcagtttc cttcagaatg ctgcaaaact atatgctaca

180



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<210> 4332

<211> 345

<212> PRT

<213> Homo sapiens

<400> 4332

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Leu	Asp	Ile	Arg	Leu	Lys	Asp	Gly	Ser	Leu	Phe	Trp	Gln	Ser	Pro	Lys
			20				25					30			
Arg	Pro	Pro	Ser	Pro	Ile	Lys	Phe	Asp	Leu	Asn	Glu	Pro	Leu	His	Leu
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<210> 4333
<211> 1278
<212> DNA
<213> Homo sapiens
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300
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&lt;210&gt; 4334

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4334

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Phe	Ala	Gly	Val	Leu	Gly	Ser	His	Glu	Arg	Gly	Pro	Arg	Ser	Phe	Pro
		20						25					30		
Val	Phe	Ser	Pro	Pro	Gly	Pro	Pro	Arg	Lys	Pro	Pro	Ala	Leu	Ser	Arg
		35					40					45			
Val	Ser	Arg	Met	Phe	Ser	Val	Ala	His	Pro	Ala	Ala	Lys	Val	Pro	Gln
	50					55				60					
Pro	Glu	Arg	Leu	Asp	Leu	Val	Tyr	Thr	Ala	Leu	Lys	Arg	Gly	Leu	Thr
65				70					75					80	
Ala	Tyr	Leu	Glu	Val	His	Gln	Gln	Glu	Gln	Lys	Leu	Gln	Gly	Gln	
			85					90					95		
Ile	Arg	Glu	Ser	Lys	Arg	Asn	Ser	Arg	Leu	Gly	Phe	Leu	Tyr	Asp	Leu

	100		105		110										
Asp	Lys	Gln	Val	Lys	Ser	Ile	Glu	Arg	Phe	Leu	Arg	Arg	Leu	Glu	Phe
	115						120				125				
His	Ala	Ser	Lys	Ile	Asp	Glu	Leu	Tyr	Glu	Ala	Tyr	Cys	Val	Gln	Arg
	130						135				140				
Arg	Leu	Arg	Asp	Gly	Ala	Tyr	Asn	Met	Val	Arg	Ala	Tyr	Thr	Thr	Gly
145					150					155					160
Ser	Pro	Gly	Ser	Arg	Glu	Ala	Arg	Asp	Ser	Leu	Ala	Glu	Ala	Thr	Arg
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&lt;210&gt; 4335

&lt;211&gt; 1211

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4335

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1080

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<210> 4336

<211> 325

<212> PRT

<213> Homo sapiens

<400> 4336

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Pro	Pro	Leu	Lys	Thr	Phe	Val	Pro	Ser	Val	Ser	Pro	Phe	Gln	Leu	Ala
			20					25					30		
Leu	Gly	Ala	Ala	Leu	Val	Asn	Val	Gln	Ile	Pro	Leu	Leu	Leu	Gly	Gln
		35					40					45			
Leu	Val	Glu	Val	Val	Ala	Lys	Tyr	Thr	Arg	Asp	His	Val	Gly	Ser	Phe
	50					55					60				
Met	Thr	Glu	Ser	Gln	Asn	Leu	Ser	Thr	His	Leu	Leu	Ile	Leu	Tyr	Gly
65					70					75					80
Val	Gln	Gly	Leu	Leu	Thr	Phe	Gly	Tyr	Leu	Val	Leu	Leu	Ser	His	Val
			85						90					95	
Gly	Glu	Arg	Met	Ala	Val	Asp	Met	Arg	Arg	Ala	Leu	Phe	Ser	Ser	Leu
			100					105					110		
Leu	Arg	Gln	Asp	Ile	Thr	Phe	Phe	Asp	Ala	Asn	Lys	Thr	Gly	Gln	Leu
	115						120					125			
Val	Ser	Arg	Leu	Thr	Thr	Asp	Val	Gln	Glu	Phe	Lys	Ser	Ser	Phe	Lys
	130					135					140				
Leu	Val	Ile	Ser	Gln	Gly	Leu	Arg	Ser	Cys	Thr	Gln	Val	Ala	Gly	Cys
145				150					155					160	
Leu	Val	Ser	Leu	Ser	Met	Leu	Ser	Thr	Arg	Leu	Thr	Leu	Leu	Leu	Met
			165					170						175	
Val	Ala	Thr	Pro	Ala	Leu	Met	Gly	Val	Gly	Thr	Leu	Met	Gly	Ser	Gly
			180					185					190		
Leu	Arg	Lys	Leu	Ser	Arg	Gln	Cys	Gln	Glu	Gln	Ile	Ala	Arg	Ala	Met
	195					200						205			
Gly	Val	Ala	Asp	Glu	Ala	Leu	Gly	Asn	Val	Arg	Thr	Val	Arg	Ala	Phe
	210					215					220				
Ala	Met	Glu	Gln	Arg	Glu	Glu	Glu	Arg	Tyr	Gly	Ala	Glu	Leu	Glu	Ala
225				230						235				240	
Cys	Arg	Cys	Arg	Ala	Glu	Glu	Leu	Gly	Arg	Gly	Ile	Ala	Leu	Phe	Gln
			245					250						255	
Gly	Leu	Ser	Asn	Ile	Ala	Phe	Asn	Cys	Met	Val	Leu	Gly	Thr	Leu	Phe
			260					265					270		
Ile	Gly	Gly	Ser	Leu	Val	Ala	Gly	Gln	Gln	Leu	Thr	Gly	Gly	Asp	Leu
	275						280					285			
Met	Ser	Phe	Leu	Val	Ala	Ser	Gln	Thr	Val	Gln	Ser	Phe	Leu	Arg	Val
	290					295					300				
Ala	Pro	Cys	Pro	Asn	Ser	Leu	Pro	Leu	Gln	Ala	Val	Thr	Leu	His	Ala
305				310						315				320	
Trp	Lys	Asp	His	Pro											

325

&lt;210&gt; 4337

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4337

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 360  
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 461

&lt;210&gt; 4338

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4338

Met	Asn	Leu	Thr	Phe	Ser	Gln	Pro	Gly	Ser	Val	Cys	Ala	Thr	Trp	Glu
1				5					10					15	
Ala	Ser	Ser	Ala	Pro	Gly	Asp	Pro	Ser	Leu	Gly	Val	Gly	Arg	Thr	Ser
			20					25					30		
Thr	Trp	Phe	Pro	Ser	Ser	Gly	Ala	His	Gly	Gly	Glu	Val	Glu	Gly	Gly
		35				40					45				
Arg	Arg	Glu	Gly	Ala	Thr	Cys	Cys	Ser	Val	Glu	Lys	Gln	Gln	Ser	Pro
50						55					60				
Leu	Gln	Pro	Ala	Gln	Leu	Ala	Phe	Leu	Thr	Leu	Ser	Leu	Pro	Gly	Leu
65				70					75					80	
Cys	Gly	Arg	Glu	Gly	Gln	Ala	Arg	Trp	Pro	Ala	Arg	Asp	Val	Val	Phe
			85					90					95		
Ser	Phe	Val	Leu	Cys	Thr	Met	Pro	Gln	Lys	Asn	Ile	Leu	Leu	Ile	Cys
			100					105					110		
Asn	Gln	Asp	Asn	Ile	Ile										
			115												

&lt;210&gt; 4339

&lt;211&gt; 5269

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4339

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120  
cccagccccg gagatggaaa tccaagagaa aacagcccat tcctcaacaa tgtcgagggtg  
180  
gaacaagaga gcttctttga agggaagaac atggcacttt tcgaggagga gatggacagt  
240  
aaccatcatg tgcctcgtc gctcaacaag ctggccaact acaccaacct gagccagggc  
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420  
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480  
atgtgctgca catgtacaat gctgaccgcc atttccatga gtgcgatcgc taccaacggt  
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gtggtcccag ctggcgggtc ctactacatg atatcgcgct cgctgggacc cgagtgttga  
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ggcgtgtcgc gcctctgctt ctacctgggc acgacgtttg cagggggccat gtatatattt  
660  
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720  
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780  
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3240



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 5160  
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 5269

<210> 4340

<211> 1088

<212> PRT

<213> Homo sapiens

<400> 4340

Met	Pro	Thr	Asn	Phe	Thr	Val	Val	Pro	Val	Glu	Ala	His	Ala	Asp	Gly	1	5	10	15
Gly	Gly	Asp	Glu	Thr	Ala	Glu	Arg	Thr	Glu	Ala	Pro	Gly	Thr	Pro	Glu	20	25	30	
Gly	Pro	Glu	Pro	Glu	Arg	Pro	Ser	Pro	Gly	Asp	Gly	Asn	Pro	Arg	Glu	35	40	45	
Asn	Ser	Pro	Phe	Leu	Asn	Asn	Val	Glu	Val	Glu	Gln	Glu	Ser	Phe	Phe	50	55	60	
Glu	Gly	Lys	Asn	Met	Ala	Leu	Phe	Glu	Glu	Glu	Met	Asp	Ser	Asn	Pro	65	70	75	80
Met	Val	Ser	Ser	Leu	Leu	Asn	Lys	Leu	Ala	Asn	Tyr	Thr	Asn	Leu	Ser	85	90	95	
Gln	Gly	Val	Val	Glu	His	Glu	Glu	Asp	Glu	Glu	Ser	Arg	Arg	Arg	Glu	100	105	110	
Ala	Lys	Ala	Pro	Arg	Met	Gly	Thr	Phe	Ile	Gly	Val	Tyr	Leu	Pro	Cys	115	120	125	
Leu	Gln	Asn	Ile	Leu	Gly	Val	Ile	Leu	Phe	Leu	Arg	Leu	Thr	Trp	Ile	130	135	140	
Val	Gly	Val	Ala	Gly	Val	Leu	Glu	Ser	Phe	Leu	Ile	Val	Ala	Met	Cys	145	150	155	160
Cys	Thr	Cys	Thr	Met	Leu	Thr	Ala	Ile	Ser	Met	Ser	Ala	Ile	Ala	Thr	165	170	175	
Asn	Gly	Val	Val	Pro	Ala	Gly	Gly	Ser	Tyr	Tyr	Met	Ile	Ser	Arg	Ser	180	185	190	
Leu	Gly	Pro	Glu	Phe	Gly	Gly	Ala	Val	Gly	Leu	Cys	Phe	Tyr	Leu	Gly	195	200	205	
Thr	Thr	Phe	Ala	Gly	Ala	Met	Tyr	Ile	Leu	Gly	Thr	Ile	Glu	Ile	Phe	210	215	220	
Leu	Thr	Tyr	Ile	Ser	Pro	Gly	Ala	Ala	Ile	Phe	Gln	Ala	Glu	Ala	Ala	225	230	235	240
Gly	Gly	Glu	Ala	Ala	Ala	Met	Leu	His	Asn	Met	Arg	Val	Tyr	Gly	Thr	245	250	255	
Cys	Thr	Leu	Val	Leu	Met	Ala	Leu	Val	Val	Phe	Val	Gly	Val	Lys	Tyr				

260	265	270
Val Asn Lys Leu Ala Leu Val	Phe Leu Ala Cys Val	Val Leu Ser Ile
275	280	285
Leu Ala Ile Tyr Ala Gly Val	Ile Lys Ser Ala Phe	Asp Pro Pro Asp
290	295	300
Ile Pro Val Cys Leu Leu Gly	Asn Arg Thr Leu Ser Arg	Arg Ser Phe
305	310	315
Asp Ala Cys Val Lys Ala Tyr	Gly Ile His Asn Asn Ser	Ala Thr Ser
325	330	335
Ala Leu Trp Gly Leu Phe Cys	Asn Gly Ser Gln Pro Ser	Ala Ala Cys
340	345	350
Asp Glu Tyr Phe Ile Gln Asn	Asn Val Thr Glu Ile Gln	Gly Ile Pro
355	360	365
Gly Ala Ala Ser Gly Val Phe	Leu Glu Asn Leu Trp Ser	Thr Tyr Ala
370	375	380
His Ala Gly Ala Phe Val Glu	Lys Lys Gly Val Pro Ser	Val Pro Val
385	390	395
Ala Glu Glu Ser Arg Ala Ser	Ala Leu Pro Tyr Val Leu	Thr Asp Ile
405	410	415
Ala Ala Ser Phe Thr Leu Leu	Val Gly Ile Tyr Phe Pro	Ser Val Thr
420	425	430
Gly Ile Met Ala Gly Ser Asn	Arg Ser Gly Asp Leu Lys	Asp Ala Gln
435	440	445
Lys Ser Ile Pro Thr Gly Thr	Ile Leu Ala Ile Val Thr	Thr Ser Phe
450	455	460
Ile Tyr Leu Ser Cys Ile Val	Leu Phe Gly Ala Cys Ile	Glu Gly Val
465	470	475
Val Leu Arg Asp Lys Phe Gly	Glu Ala Leu Gln Gly Asn	Leu Val Ile
485	490	495
Gly Met Leu Ala Trp Pro Ser	Pro Trp Val Ile Val Ile	Gly Ser Phe
500	505	510
Phe Ser Thr Cys Gly Ala Gly	Leu Gln Thr Leu Thr Gly	Ala Pro Arg
515	520	525
Leu Leu Gln Ala Ile Ala Arg	Asp Gly Ile Val Pro Phe	Leu Gln Val
530	535	540
Phe Gly His Gly Lys Ala Asn	Gly Glu Pro Thr Trp Ala	Leu Leu Leu
545	550	555
Thr Val Leu Ile Cys Glu Thr	Gly Ile Leu Ile Ala Ser	Leu Asp Ser
565	570	575
Val Ala Pro Ile Leu Ser Met	Phe Phe Leu Met Cys Tyr	Leu Phe Val
580	585	590
Asn Leu Ala Cys Ala Val Gln	Thr Leu Leu Arg Thr Pro	Asn Trp Arg
595	600	605
Pro Arg Phe Lys Phe Tyr His	Trp Thr Leu Ser Phe Leu	Gly Met Ser
610	615	620
Leu Cys Leu Ala Leu Met Phe	Ile Cys Ser Trp Tyr Tyr	Ala Leu Ser
625	630	635
Ala Met Leu Ile Ala Gly Cys	Ile Tyr Lys Tyr Ile Glu	Tyr Arg Gly
645	650	655
Ala Glu Lys Glu Trp Gly Asp	Gly Ile Arg Gly Leu Ser	Leu Asn Ala
660	665	670
Ala Arg Tyr Ala Leu Leu Arg	Val Glu His Gly Pro Pro	His Thr Lys
675	680	685
Asn Trp Arg Pro Gln Val Leu	Val Met Leu Asn Leu Asp	Ala Glu Gln

690 695 700  
 Ala Val Lys His Pro Arg Leu Leu Ser Phe Thr Ser Gln Leu Lys Ala  
 705 710 715 720  
 Gly Lys Gly Leu Thr Ile Val Gly Ser Val Leu Glu Gly Thr Tyr Leu  
 725 730 735  
 Asp Lys His Met Glu Ala Gln Arg Ala Glu Glu Asn Ile Arg Ser Leu  
 740 745 750  
 Met Ser Thr Glu Lys Thr Lys Gly Phe Cys Gln Leu Val Val Ser Ser  
 755 760 765  
 Ser Leu Arg Asp Gly Met Ser His Leu Ile Gln Ser Ala Gly Leu Gly  
 770 775 780  
 Gly Leu Lys His Asn Thr Val Leu Met Ala Trp Pro Ala Ser Trp Lys  
 785 790 795 800  
 Gln Glu Asp Asn Pro Phe Ser Trp Lys Asn Phe Val Asp Thr Val Arg  
 805 810 815  
 Asp Thr Thr Ala Ala His Gln Ala Leu Leu Val Ala Lys Asn Val Asp  
 820 825 830  
 Ser Phe Pro Gln Asn Gln Glu Arg Phe Gly Gly Gly His Ile Asp Val  
 835 840 845  
 Trp Trp Ile Val His Asp Gly Gly Met Leu Met Leu Leu Pro Phe Leu  
 850 855 860  
 Leu Arg Gln His Lys Val Trp Arg Lys Cys Arg Met Arg Ile Phe Thr  
 865 870 875 880  
 Val Ala Gln Val Asp Asp Asn Ser Ile Gln Met Lys Lys Asp Leu Gln  
 885 890 895  
 Met Phe Leu Tyr His Leu Arg Ile Ser Ala Glu Val Glu Val Val Glu  
 900 905 910  
 Met Val Glu Asn Asp Ile Ser Ala Phe Thr Tyr Glu Arg Thr Leu Met  
 915 920 925  
 Met Glu Gln Arg Ser Gln Met Leu Lys Gln Met Gln Leu Ser Lys Asn  
 930 935 940  
 Glu Gln Glu Arg Glu Ala Gln Leu Ile His Asp Arg Asn Thr Ala Ser  
 945 950 955 960  
 His Thr Ala Ala Ala Ala Arg Thr Gln Ala Pro Pro Thr Pro Asp Lys  
 965 970 975  
 Val Gln Met Thr Trp Thr Arg Glu Lys Leu Ile Ala Glu Lys Tyr Arg  
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 Ser Arg Asp Thr Ser Leu Ser Gly Phe Lys Asp Leu Phe Ser Met Lys  
 995 1000 1005  
 Pro Glu Trp Gly Asn Leu Asp Gln Ser Asn Val Arg Arg Met His Thr  
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 Ala Val Lys Leu Asn Gly Val Val Leu Asn Lys Ser Gln Asp Ala Gln  
 1025 1030 1035 1040  
 Leu Val Leu Leu Asn Met Pro Gly Pro Pro Lys Asn Arg Gln Gly Asp  
 1045 1050 1055  
 Glu Asn Tyr Met Glu Phe Leu Glu Val Leu Thr Glu Gly Leu Asn Arg  
 1060 1065 1070  
 Val Leu Leu Val Arg Gly Gly Gly Arg Glu Val Ile Thr Ile Tyr Ser  
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&lt;210&gt; 4341

&lt;211&gt; 693

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4341

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 693

&lt;210&gt; 4342

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4342

Met	Val	Arg	Leu	Leu	Lys	Arg	Lys	Val	Gln	His	Lys	Asp	Pro	Pro	Glu
1				5					10					15	
Arg	Gly	Gln	Ser	Ser	Arg	Gly	Trp	Asn	Ala	Ser	Leu	Gly	Leu	Gly	Glu
			20					25					30		
Lys	Glu	Gly	Leu	Val	Ser	Val	Gly	Ile	Thr	Gln	Lys	Arg	Ala	Leu	Tyr
			35				40					45			
Met	Phe	Ser	Tyr	Lys	Tyr	Ser	Val	Met	Glu	Lys	His	Ser	Leu	Asp	Ala
	50				55						60				
Tyr	Gly	Ser	Leu	Arg	Ser	Phe	Phe	Phe	His	Pro	Leu	Phe	Leu	Glu	Lys
65				70						75				80	
Lys	Phe	Phe	Lys	Ala	Tyr	Asn	Leu	Lys	Ser	Thr	Ser	Thr	Tyr	Ser	Arg
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			100												

&lt;210&gt; 4343

&lt;211&gt; 499

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4343

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&lt;210&gt; 4344

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4344

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			20					25					30		
Thr	Leu	Gly	Ala	Trp	Thr	Glu	Ser	Ser	Gly	Gly	Arg	Ala	Ala	Gly	Pro
		35					40					45			
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65					70					75				80	
Lys	Met	Glu	Phe	Pro	Val	Trp	Leu	Gln	Leu	Ala	Ala	Arg	Ser	Gln	Ser
				85				90						95	
Ser	Ser	Val	Ile	Arg	Leu	Ser	Asp	Cys	Ser	Pro	Phe	Ile	Ser	Phe	Ala
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				115											

&lt;210&gt; 4345

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4345

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<210> 4346

<211> 116

<212> PRT

<213> Homo sapiens

<400> 4346

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			20					25					30		
Thr	Leu	Thr	His	Met	Ser	Ile	Thr	Arg	Leu	His	Glu	Gln	Lys	Leu	Val
		35					40					45			
Gln	His	Val	Val	Ser	Gln	Asn	Cys	Asp	Gly	Leu	His	Leu	Arg	Ser	Gly
	50					55					60				
Leu	Xaa	Arg	Thr	Ala	Ile	Ser	Glu	Leu	His	Gly	Asn	Met	Tyr	Ile	Glu
65					70					75				80	
Gly	Val	Arg	Ala	Gly	Val	Arg	Cys	Asp	Gly	Ala	His	Cys	Pro	Pro	Gln
			85					90					95		
Thr	Pro	Asp	Arg	Pro	Asp	Leu	Pro	Gln	Val	Trp	Asp	Pro	Ala	Ala	Gly
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His	His	Cys	Ala												
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<212> DNA

<213> Homo sapiens

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<210> 4348

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<212> PRT

<213> Homo sapiens

&lt;400&gt; 4348

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Arg Gln Cys Arg Gly Arg Ser Arg Arg Val Ala Arg Ser Ser Leu
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Pro Ser Pro Ser Ala Arg Pro Gly Arg Gly Gly Arg Pro Gly Pro Gly
          50           55           60
Gly Ser Ala Gly Cys Pro Gly Leu
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&lt;210&gt; 4349

&lt;211&gt; 2040

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4349

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<211> 113

<212> PRT

<213> Homo sapiens

<400> 4350

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			20					25					30		
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<211> 86

<212> PRT

<213> Homo sapiens

<400> 4352

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			20					25					30		
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		35				40					45				
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<211> 2471

<212> DNA

<213> Homo sapiens

<400> 4353

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<210> 4354

<211> 586

<212> PRT

<213> Homo sapiens

<400> 4354

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Ser	Lys	Glu	Met	Ser	Leu	Glu	Glu	Pro	Lys	Lys	Met	Thr	Arg	Glu	Asp
		20						25					30		
Trp	Arg	Lys	Lys	Lys	Glu	Leu	Glu	Glu	Gln	Arg	Lys	Leu	Gly	Asn	Ala
		35					40					45			
Pro	Ala	Glu	Val	Asp	Glu	Glu	Gly	Lys	Asp	Ile	Asn	Pro	His	Ile	Pro
	50					55					60				
Gln	Tyr	Ile	Ser	Ser	Val	Pro	Trp	Tyr	Ile	Asp	Pro	Ser	Lys	Arg	Pro
65					70					75					80
Thr	Leu	Lys	His	Gln	Arg	Pro	Gln	Pro	Glu	Lys	Gln	Lys	Gln	Phe	Ser
			85						90					95	
Ser	Ser	Gly	Glu	Trp	Tyr	Lys	Arg	Gly	Val	Lys	Glu	Asn	Ser	Ile	Ile
		100						105				110			
Thr	Lys	Tyr	Arg	Lys	Gly	Ala	Cys	Glu	Asn	Cys	Gly	Ala	Met	Thr	His
		115				120					125				
Lys	Lys	Lys	Asp	Cys	Phe	Glu	Arg	Pro	Arg	Arg	Val	Gly	Ala	Lys	Phe
	130					135					140				
Thr	Gly	Thr	Asn	Ile	Ala	Pro	Asp	Glu	His	Val	Gln	Pro	Gln	Leu	Met
145				150						155					160
Phe	Asp	Tyr	Asp	Gly	Lys	Arg	Asp	Arg	Trp	Asn	Gly	Tyr	Asn	Pro	Glu
			165					170						175	
Glu	His	Met	Lys	Ile	Val	Glu	Glu	Tyr	Ala	Lys	Val	Asp	Leu	Ala	Lys
		180						185					190		
Arg	Thr	Leu	Lys	Ala	Gln	Lys	Leu	Gln	Glu	Glu	Leu	Ala	Ser	Gly	Lys
	195					200						205			
Leu	Val	Glu	Gln	Ala	Asn	Ser	Pro	Lys	His	Gln	Trp	Gly	Glu	Glu	Glu
	210					215					220				
Pro	Asn	Ser	Gln	Thr	Glu	Lys	Asp	His	Asn	Ser	Glu	Asp	Glu	Asp	Glu
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Asp	Lys	Tyr	Ala	Asp	Asp	Ile	Asp	Met	Pro	Gly	Gln	Asn	Phe	Asp	Ser
			245					250					255		
Lys	Arg	Arg	Ile	Thr	Val	Arg	Asn	Leu	Arg	Ile	Arg	Glu	Asp	Ile	Ala
			260					265					270		
Lys	Tyr	Leu	Arg	Asn	Leu	Asp	Pro	Asn	Ser	Ala	Tyr	Tyr	Asp	Pro	Lys
	275					280						285			
Thr	Arg	Ala	Met	Arg	Glu	Asn	Pro	Tyr	Ala	Asn	Ala	Gly	Lys	Asn	Pro
	290					295					300				
Asp	Glu	Val	Ser	Tyr	Ala	Gly	Asp	Asn	Phe	Val	Arg	Tyr	Thr	Gly	Asp
305					310						315			320	
Thr	Ile	Ser	Met	Ala	Gln	Thr	Gln	Leu	Phe	Ala	Trp	Glu	Ala	Tyr	Asp

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 Lys Gly Ser Glu Val His Leu Gln Ala Asp Pro Thr Lys Leu Glu Leu  
 340 345 350  
 Leu Tyr Lys Ser Phe Lys Val Lys Lys Glu Asp Phe Lys Glu Gln Gln  
 355 360 365  
 Lys Glu Ser Ile Leu Glu Lys Tyr Gly Gly Gln Glu His Leu Asp Ala  
 370 375 380  
 Pro Pro Ala Glu Leu Leu Leu Ala Gln Thr Glu Asp Tyr Val Glu Tyr  
 385 390 395 400  
 Ser Arg His Gly Thr Val Ile Lys Gly Gln Glu Arg Ala Val Ala Cys  
 405 410 415  
 Ser Lys Tyr Glu Glu Asp Val Lys Ile His Asn His Thr His Ile Trp  
 420 425 430  
 Gly Ser Tyr Trp Lys Glu Gly Arg Trp Gly Tyr Lys Cys Cys His Ser  
 435 440 445  
 Phe Phe Lys Tyr Ser Tyr Cys Thr Gly Glu Ala Gly Lys Glu Ile Val  
 450 455 460  
 Asn Ser Glu Glu Cys Ile Ile Asn Glu Ile Thr Gly Glu Glu Ser Val  
 465 470 475 480  
 Lys Lys Pro Gln Thr Leu Met Glu Leu His Gln Glu Lys Leu Lys Glu  
 485 490 495  
 Glu Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys His Arg Lys Ser Ser  
 500 505 510  
 Ser Asp Ser Asp Asp Glu Glu Lys Lys His Glu Lys Leu Lys Lys Ala  
 515 520 525  
 Leu Asn Ala Glu Glu Ala Arg Leu Leu His Val Lys Glu Thr Met Gln  
 530 535 540  
 Ile Asp Glu Arg Lys Arg Pro Tyr Asn Ser Met Tyr Glu Thr Arg Glu  
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 Pro Thr Glu Glu Glu Met Glu Ala Tyr Arg Met Lys Arg Gln Arg Pro  
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 Asp Asp Pro Met Ala Ser Phe Leu Gly Gln  
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&lt;210&gt; 4355

&lt;211&gt; 1741

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4355

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 gatggccggg ctggtgtggt tgcaaatgat gccggtgacc gagttactcc agctgttgtt  
 180  
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 420



atatttagta aaatgaaaga aacggcacat tctgtattgg gctcagatgc aaatgatgta  
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540  
agagctgctg gatttaatgt tttgcgatta attcacgaac cgtctgcagc tcttcttgc  
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a  
1741

&lt;210&gt; 4356

&lt;211&gt; 509

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4356

Met Ala Ala Ile Gly Val His Leu Gly Cys Thr Ser Ala Cys Val Ala

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Val Tyr Lys Asp Gly Arg Ala Gly Val Val Ala Asn Asp Ala Gly Asp			
20	25	30	
Arg Val Thr Pro Ala Val Val Ala Tyr Ser Glu Asn Glu Glu Ile Val			
35	40	45	
Gly Leu Ala Ala Lys Gln Ser Arg Ile Arg Asn Ile Ser Asn Thr Val			
50	55	60	
Met Lys Val Lys Gln Ile Leu Gly Arg Ser Ser Ser Asp Pro Gln Ala			
65	70	75	80
Gln Lys Tyr Ile Ala Glu Ser Lys Cys Leu Val Ile Glu Lys Asn Gly			
85	90	95	
Lys Leu Arg Tyr Glu Ile Asp Thr Gly Glu Glu Thr Lys Phe Val Asn			
100	105	110	
Pro Glu Asp Val Ala Arg Leu Ile Phe Ser Lys Met Lys Glu Thr Ala			
115	120	125	
His Ser Val Leu Gly Ser Asp Ala Asn Asp Val Val Ile Thr Val Pro			
130	135	140	
Phe Asp Phe Gly Glu Lys Gln Lys Asn Ala Leu Gly Glu Ala Ala Arg			
145	150	155	160
Ala Ala Gly Phe Asn Val Leu Arg Leu Ile His Glu Pro Ser Ala Ala			
165	170	175	
Leu Leu Ala Tyr Gly Ile Gly Gln Asp Ser Pro Thr Gly Lys Ser Asn			
180	185	190	
Ile Leu Val Phe Lys Leu Gly Gly Thr Ser Leu Ser Leu Ser Val Met			
195	200	205	
Glu Val Asn Ser Gly Ile Tyr Arg Val Leu Ser Thr Asn Thr Asp Asp			
210	215	220	
Asn Ile Gly Gly Ala His Phe Thr Glu Thr Leu Ala Gln Tyr Leu Ala			
225	230	235	240
Ser Glu Phe Gln Arg Ser Phe Lys His Asp Val Arg Gly Asn Ala Arg			
245	250	255	
Ala Met Met Lys Leu Thr Asn Ser Ala Glu Val Ala Lys His Ser Leu			
260	265	270	
Ser Thr Leu Gly Ser Ala Asn Cys Phe Leu Asp Ser Leu Tyr Glu Gly			
275	280	285	
Gln Asp Phe Asp Cys Asn Val Ser Arg Ala Arg Phe Glu Leu Leu Cys			
290	295	300	
Ser Pro Leu Phe Asn Lys Cys Ile Glu Ala Ile Arg Gly Leu Leu Asp			
305	310	315	320
Gln Asn Gly Phe Thr Ala Asp Asp Ile Asn Lys Val Val Leu Cys Gly			
325	330	335	
Gly Ser Ser Arg Ile Pro Lys Leu Gln Gln Leu Ile Lys Asp Leu Phe			
340	345	350	
Pro Ala Val Glu Leu Leu Asn Ser Ile Pro Pro Asp Glu Val Ile Pro			
355	360	365	
Ile Gly Ala Ala Ile Glu Ala Gly Ile Leu Ile Gly Lys Glu Asn Leu			
370	375	380	
Leu Val Glu Asp Ser Leu Met Ile Glu Cys Ser Ala Arg Asp Ile Leu			
385	390	395	400
Val Lys Gly Val Asp Glu Ser Gly Ala Ser Arg Phe Thr Val Leu Phe			
405	410	415	
Pro Ser Gly Thr Pro Leu Pro Ala Arg Gln His Thr Leu Gln Ala			
420	425	430	
Pro Gly Ser Ile Ser Ser Val Cys Leu Glu Leu Tyr Glu Ser Asp Gly			

```

      435              440              445
Lys Asn Ser Ala Lys Glu Glu Thr Lys Phe Ala Gln Val Val Leu Gln
      450              455              460
Asp Leu Asp Lys Lys Glu Asn Gly Leu Arg Asp Ile Leu Ala Val Leu
465              470              475              480
Thr Met Lys Arg Asp Gly Ser Leu His Val Thr Cys Thr Asp Gln Glu
      485              490              495
Thr Gly Lys Cys Glu Ala Ile Ser Ile Glu Ile Ala Ser
      500              505

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&lt;210&gt; 4357

&lt;211&gt; 421

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4357

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420
g
421

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&lt;210&gt; 4358

&lt;211&gt; 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4358

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Met Trp Phe Cys Gly Gln Ser Thr Pro Phe Gly Cys Glu Leu His Asp
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Thr Cys Val Gln Leu Cys His Phe His Ser Ala Leu Leu His Arg Arg
      20              25              30
Gln Lys Pro Trp Pro Ser Pro Ala Val Phe Phe Arg Arg Asn Val Arg
      35              40              45
Gly Leu Pro Pro Arg Phe Ser Ser Pro Thr Pro Leu Trp Arg Lys Val
      50              55              60
Leu Ser Thr Ala Val Val Gly Ala Pro Leu Leu Gly Ala Arg Tyr
65              70              75              80
Val Met Ala Glu Ala Arg Glu Lys Arg Arg Met Arg Leu Val Val Asp
      85              90              95
Gly Met Gly Arg Phe Cys Arg Ser Leu Lys Val Gly Leu Gln Ile Ser
      100              105              110
Leu Asp Tyr

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115

&lt;210&gt; 4359

&lt;211&gt; 3661

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4359

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180  
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240  
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480  
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1380

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 3660  
 a  
 3661

&lt;210&gt; 4360

&lt;211&gt; 670

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4360

Met	Ser	Ser	Gly	Lys	Ser	Ala	Arg	Tyr	Asn	Arg	Phe	Ser	Gly	Gly	Pro
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Ser	Asn	Leu	Pro	Thr	Pro	Asp	Val	Thr	Thr	Gly	Thr	Arg	Met	Glu	Thr
		20						25					30		
Thr	Phe	Gly	Pro	Ala	Phe	Ser	Ala	Val	Thr	Thr	Ile	Thr	Lys	Ala	Asp
	35					40						45			
Gly	Thr	Ser	Thr	Tyr	Lys	Gln	His	Cys	Arg	Thr	Pro	Ser	Ser	Ser	Ser
	50				55						60				
Thr	Leu	Ala	Tyr	Ser	Pro	Arg	Asp	Glu	Glu	Asp	Ser	Met	Pro	Pro	Ile
65					70					75				80	
Ser	Thr	Pro	Arg	Arg	Ser	Asp	Ser	Ala	Ile	Ser	Val	Arg	Ser	Leu	His
			85						90				95		
Ser	Glu	Ser	Ser	Met	Ser	Leu	Arg	Ser	Thr	Phe	Ser	Leu	Pro	Glu	Glu
			100					105					110		
Glu	Glu	Glu	Pro	Glu	Pro	Leu	Val	Phe	Ala	Glu	Gln	Pro	Ser	Val	Lys
	115					120					125				
Leu	Cys	Cys	Gln	Leu	Cys	Cys	Ser	Val	Phe	Lys	Asp	Pro	Val	Ile	Thr
	130				135					140					
Thr	Cys	Gly	His	Thr	Phe	Cys	Arg	Arg	Cys	Ala	Leu	Lys	Ser	Glu	Lys
145					150				155					160	
Cys	Pro	Val	Asp	Asn	Val	Lys	Leu	Thr	Val	Val	Val	Asn	Asn	Ile	Ala
			165					170						175	
Val	Ala	Glu	Gln	Ile	Gly	Glu	Leu	Phe	Ile	His	Cys	Arg	His	Gly	Cys

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      180      185      190
Arg Val Ala Gly Ser Gly Lys Pro Pro Ile Phe Glu Val Asp Pro Arg
      195      200      205
Gly Cys Pro Phe Thr Ile Lys Leu Ser Ala Arg Lys Asp His Glu Gly
      210      215      220
Ser Cys Asp Tyr Arg Pro Val Arg Cys Pro Asn Asn Pro Ser Cys Pro
225      230      235      240
Pro Leu Leu Arg Met Asn Leu Glu Ala His Leu Lys Glu Cys Glu His
      245      250      255
Ile Lys Cys Pro His Ser Lys Tyr Gly Cys Thr Phe Ile Gly Asn Gln
      260      265      270
Asp Thr Tyr Glu Thr His Leu Glu Thr Cys Arg Phe Glu Gly Leu Lys
      275      280      285
Glu Phe Leu Gln Gln Thr Asp Asp Arg Phe His Glu Met His Val Ala
      290      295      300
Leu Ala Gln Lys Asp Gln Glu Ile Ala Phe Leu Arg Ser Met Leu Gly
305      310      315      320
Lys Leu Ser Glu Lys Ile Asp Gln Leu Glu Lys Ser Leu Glu Leu Lys
      325      330      335
Phe Asp Val Leu Asp Glu Asn Gln Ser Lys Leu Ser Glu Asp Leu Met
      340      345      350
Glu Phe Arg Arg Asp Ala Ser Met Leu Asn Asp Glu Leu Ser His Ile
      355      360      365
Asn Ala Arg Leu Asn Met Gly Ile Leu Gly Ser Tyr Asp Pro Gln Gln
      370      375      380
Ile Phe Lys Cys Lys Gly Thr Phe Val Gly His Gln Gly Pro Val Trp
385      390      395      400
Cys Leu Cys Val Tyr Ser Met Gly Asp Leu Leu Phe Ser Gly Ser Ser
      405      410      415
Asp Lys Thr Ile Lys Val Trp Asp Thr Cys Thr Thr Tyr Lys Cys Gln
      420      425      430
Lys Thr Leu Glu Gly His Asp Gly Ile Val Leu Ala Leu Cys Ile Gln
      435      440      445
Gly Cys Lys Leu Tyr Ser Gly Ser Ala Asp Cys Thr Ile Ile Val Trp
      450      455      460
Asp Ile Gln Asn Leu Gln Lys Val Asn Thr Ile Arg Ala His Asp Asn
465      470      475      480
Pro Val Cys Thr Leu Val Ser Ser His Asn Val Leu Phe Ser Gly Ser
      485      490      495
Leu Lys Ala Ile Lys Val Trp Asp Ile Val Gly Thr Glu Leu Lys Leu
      500      505      510
Lys Lys Glu Leu Thr Gly Leu Asn His Trp Val Arg Ala Leu Val Ala
      515      520      525
Ala Gln Ser Tyr Leu Tyr Ser Gly Ser Tyr Gln Thr Ile Lys Ile Trp
      530      535      540
Asp Ile Arg Thr Leu Asp Cys Ile His Val Leu Gln Thr Ser Gly Gly
545      550      555      560
Ser Val Tyr Ser Ile Ala Val Thr Asn His His Ile Val Cys Gly Thr
      565      570      575
Tyr Glu Asn Leu Ile His Val Trp Asp Ile Glu Ser Lys Glu Gln Val
      580      585      590
Arg Thr Leu Thr Gly His Val Gly Thr Val Tyr Ala Leu Ala Val Ile
      595      600      605
Ser Thr Pro Asp Gln Thr Lys Val Phe Ser Ala Ser Tyr Asp Arg Ser

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610	615	620
Leu Arg Val Trp Ser Met Asp Asn Met Ile Cys Thr Gln Thr Leu Leu		
625	630	635
Arg His Gln Gly Ser Val Thr Ala Leu Ala Val Ser Arg Gly Arg Leu		640
	645	650
Phe Ser Gly Ala Val Asp Ser Thr Val Lys Val Trp Thr Cys		655
660	665	670

<210> 4361  
 <211> 574  
 <212> DNA  
 <213> Homo sapiens

<400> 4361  
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 60  
 gtcacagggg cagctgatgg cgtcacccgg ctgtttgaca tgcagcagca tgagtgcgcg  
 120  
 atgagctgga gggcccaacta cggggaggtc tactctgtgg agttcagcta tgatgagaac  
 180  
 accgtgtaca gcatcggcga ggacgggaag gtaggcggct ccaggattca gataagagag  
 240  
 caccgggatg acatgtgggc cggctgcagg ttgtggccat acctgttact agctctgcaa  
 300  
 cctggggcct ctttttgcag ctttgttata tgtagaatag ggataaacta gtaattcgtc  
 360  
 ttacaatcct tgcgaggttt tagtgaattc agtgggagtt ggctatcctt atgaaaggaa  
 420  
 gtaccaaaaa ttactcatct taccatagat gtatctgtgg ggtctggatt tagggctgag  
 480  
 tttgctttgc tgggcttggt agtgagtggc cccaggacca ctcattggatg tgtagtttgc  
 540  
 tgagtggctg gggacagctt cttacatgtg taca  
 574

<210> 4362  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

<400> 4362  
 Xaa Ile Gln Asn Pro Leu Leu Ser Gly Cys Thr Ala Phe Asn His Asn  
 1 5 10 15  
 Gly Asn Leu Leu Val Thr Gly Ala Ala Asp Gly Val Ile Arg Leu Phe  
 20 25 30  
 Asp Met Gln Gln His Glu Cys Ala Met Ser Trp Arg Ala His Tyr Gly  
 35 40 45  
 Glu Val Tyr Ser Val Glu Phe Ser Tyr Asp Glu Asn Thr Val Tyr Ser  
 50 55 60  
 Ile Gly Glu Asp Gly Lys Val Gly Gly Ser Arg Ile Gln Ile Arg Glu  
 65 70 75 80  
 His Arg Asp Asp Met Trp Ala Gly Cys Arg Leu Trp Pro Tyr Leu Leu  
 85 90 95  
 Leu Ala Leu Gln Pro Gly Ala Ser Phe Cys Ser Phe Val Ile Cys Arg



100  
Ile Gly Ile Asn  
115

105

110

<210> 4363  
<211> 1222  
<212> DNA  
<213> Homo sapiens

<400> 4363  
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 60  
 tggctttaat ttgaaaaatc tgattggggg ctcttcccgt atcagagaag gaacagccca  
 120  
 agctatgacc ccagggccag ggaattcagt cccaccaga ccctgtcatt ccatactag  
 180  
 ggggtaattc caggctcccc ctgccagccc tgagacagga ggacggatgt gaagttgccc  
 240  
 aggactagat tctgtctctc caaagtggcc caagccctgt tctctgtact aggggaagcca  
 300  
 gctgtgtctt ttcgaggaca gttggtccag ccagcaggct cagttcagat accagacaac  
 360  
 cattccagca cgagggtcga gcgccctggc cccggcggtc gctccagtgc ctgtgtgccc  
 420  
 accagcacat ccatgaggta gtccaattcg gcctcgtcca gctccggagc ttcctccttg  
 480  
 cccggcccat cctcagggcc tggtttgagg ccctcagagg ctggtgcca aagttcattg  
 540  
 tcatacatag aggtgtcaat atcctcaaac aggccctcga gccatcgtc cagtagacag  
 600  
 ccagtggctg ggcccagcag gtccaaggca cccaggctgg gcgtgctcc cccgatgcta  
 660  
 cggcctggtg gcccctcgtc tgccaagggt tggggagcct gactcaggcc ctcaatgtgg  
 720  
 ctgaggtcct ccaggaggct ggccatggag gctgaaaggg cagcgtccga gcttgccagt  
 780  
 aagttgtcag ccacactggg ggctgcagggt gggctaggca cagggtggcag ggcagccgag  
 840  
 ggtgccatgg acgccnntgg atgcgccgca gagtgttcac gaccagcacc aggtgccgca  
 900  
 ggtccggctc actctgctgc aggctgtggt nggagcttga gactgagag gtcaaagagg  
 960  
 gagctagagg ccacggccgg ggggtgcctgt gccaccgctg cgtggccagg atctagccac  
 1020  
 caggagtcca ctgccagagg ttccttctcc tctcctcct cccgtttccg cttcagaccc  
 1080  
 ttgctcagca tcttgtcac tagcggccaa tcagaacgaa gaggtagcca cccacaacca  
 1140  
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 1200  
 tcgcgagacg cagttctagc ga  
 1222

<210> 4364

<211> 75  
 <212> PRT  
 <213> Homo sapiens

<400> 4364  
 Asp Arg Arg Thr Asp Val Lys Leu Pro Arg Thr Arg Phe Cys Leu Ser  
 1 5 10 15  
 Lys Val Ala Gln Ala Leu Phe Ser Val Leu Gly Lys Pro Ala Val Ser  
 20 25 30  
 Phe Arg Gly Gln Leu Val Gln Pro Ala Gly Ser Val Gln Ile Pro Asp  
 35 40 45  
 Asn His Ser Ser Thr Arg Ala Gln Arg Pro Gly Pro Gly Gly Arg Ser  
 50 55 60  
 Ser Ala Cys Val Pro Thr Ser Thr Ser Met Arg  
 65 70 75

<210> 4365  
 <211> 469  
 <212> DNA  
 <213> Homo sapiens

<400> 4365  
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 60  
 gagttcaccg gcatgtcggc cgccgacttc ctcgctgaca agggcagcca ggttgagatc  
 120  
 gtcaccgacg acatcaagcc ggggtgtggcg attggcggta cgtcgttccc gacctactac  
 180  
 cgcagcatgt acccgaaaga agtgatcatg accggcgaca tgatgctgga aaaggtctat  
 240  
 cgcgagggcg acaagctggc ggcgggtgctg gagaacgaat acaccggcgc caaggaagag  
 300  
 cggtgtgctc accaggtggc ggtggagaac ggtgtgcgtc cggatgagga aatctactac  
 360  
 gggctcaagg aaggttcgcg caacaagggc cagatcgatg tcgaagccct gttcgcgatc  
 420  
 aagccgcagc cttcgtgaa tactcttaat gaagaggcag cgggtgacg  
 469

<210> 4366  
 <211> 156  
 <212> PRT  
 <213> Homo sapiens

<400> 4366  
 Asp Val Leu Asp Gly Lys Val Ala Pro Gly Lys Asn Val Pro Val Tyr  
 1 5 10 15  
 Asp Thr Ile Cys Glu Phe Thr Gly Met Ser Val Ala Asp Phe Leu Ala  
 20 25 30  
 Asp Lys Gly Ser Gln Val Glu Ile Val Thr Asp Asp Ile Lys Pro Gly  
 35 40 45  
 Val Ala Ile Gly Gly Thr Ser Phe Pro Thr Tyr Tyr Arg Ser Met Tyr  
 50 55 60  
 Pro Lys Glu Val Ile Met Thr Gly Asp Met Met Leu Glu Lys Val Tyr

65		70		75		80									
Arg	Glu	Gly	Asp	Lys	Leu	Val	Ala	Val	Leu	Glu	Asn	Glu	Tyr	Thr	Gly
				85					90					95	
Ala	Lys	Glu	Glu	Arg	Val	Val	Asp	Gln	Val	Val	Val	Glu	Asn	Gly	Val
				100				105				110			
Arg	Pro	Asp	Glu	Glu	Ile	Tyr	Tyr	Gly	Leu	Lys	Glu	Gly	Ser	Arg	Asn
				115				120				125			
Lys	Gly	Gln	Ile	Asp	Val	Glu	Ala	Leu	Phe	Ala	Ile	Lys	Pro	Gln	Pro
				130				135				140			
Ser	Leu	Asn	Thr	Leu	Asn	Glu	Glu	Ala	Ala	Gly	Asp				
145					150					155					

<210> 4367  
 <211> 852  
 <212> DNA  
 <213> Homo sapiens

<400> 4367  
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 60  
 ggccttttgc aggtggaatt tccagaggcc cggatcttcg aggagaccct gaacatcctc  
 120  
 atctacgaga ctccccgggg ccagaccca gccctcctgg aggccacagg gggagcagct  
 180  
 ggagctggtg gggctggccg cggggaggat gaagagaacc gagagcaccg tgtccgcagg  
 240  
 atccatgtcc ggcgccatat caccacgac gagcgtcctc atggccaaca aattgtcttc  
 300  
 aaggactgac ctctgacctt cccctgcctt tctcttgcc ttgggacca gtcctctctt  
 360  
 ctttccctcc ccttccaga cttttgccc ggctctgctg gccaaagtcgt gggctcctct  
 420  
 ctgtcccttc attgcatggc acagctcact ttggcccttc tccaccgct ccaacccat  
 480  
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 540  
 cccacacctg gccctgcgtc ctccctctc cagctgggta agagggattt agaattccct  
 600  
 ttctcttttt ttagtgatc gtccatgcca aagtgtgcgg cccttctga catcaccaca  
 660  
 gtctgagcag cctcccgct cctgcagggt agtccgcccc ctctcccca ccctctccc  
 720  
 tacctctta actttgtact agactggcct gggcctgcc agctcagcgt tatcagctg  
 780  
 tttcatatta ttattatatt taattttcta ttaaattatt gaaataaagt taagttgaga  
 840  
 aactaaaaaa aa  
 852

<210> 4368  
 <211> 102  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 4368

Xaa Leu Gly Arg Gly Met Ala Leu Arg Asp Cys Thr Arg Arg Lys Glu  
 1 5 10 15  
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 20 25 30  
 Phe Glu Glu Thr Leu Asn Ile Leu Ile Tyr Glu Thr Pro Arg Gly Pro  
 35 40 45  
 Asp Pro Ala Leu Leu Glu Ala Thr Gly Gly Ala Ala Gly Ala Gly Gly  
 50 55 60  
 Ala Gly Arg Gly Glu Asp Glu Glu Asn Arg Glu His Arg Val Arg Arg  
 65 70 75 80  
 Ile His Val Arg Arg His Ile Thr His Asp Glu Arg Pro His Gly Gln  
 85 90 95  
 Gln Ile Val Phe Lys Asp  
 100

&lt;210&gt; 4369

&lt;211&gt; 1264

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4369

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 60  
 tcctccatca gcgagctctc tgcacgactt cacctctggg cattcaaat ggattatgaa  
 120  
 actacagaaa aggaagtagc agaaccactc ctggacctga aggaaggaat agaccagttg  
 180  
 gagaacaata aaaccttggg ctttattcctg tctactctct tagccattgg gaactttcta  
 240  
 aatggaacta atgccaaagc gtttgagtta agctacctcg agaagggtcc agaagtcaaa  
 300  
 gacacagtgc acaagcagtc gcttctccac catgtgtgca ccatggtggt agaaaacttc  
 360  
 ccagacagct ccgatctgta ctccggagatc ggggccatca ccaggtcagc caagggtgac  
 420  
 tttgatcaac ttcaggataa tttatgtcag atggagagaa gatgcaaagc ttcattgggt  
 480  
 cacctcaagg caattgcaaa acatgaaatg aaaccagttt taaaacaacg gatgtcagag  
 540  
 ttcttgaaag actgtgcaga gcgaattata attttaaaga ttgtccatag aaggataatc  
 600  
 aacagattcc actccttttt actctttatg ggccatccac cttatgcaat tcgggaagtg  
 660  
 aacataaaca aattctgcag gattattagt gaatttgac tagagtatcg cacaaccagg  
 720  
 gaaagggttt tgcagcagaa acagaaacgg gccaaaccaca gagagagaaa taagaccaga  
 780  
 gggaagatga tcaccgattc tggcaagttc tccggcagtt ctccggcgcc cccaagccag  
 840  
 ccgcagggtc tgagctatgc ggaggacgcg gctgagcacg agaacatgaa ggctgtgctg  
 900  
 aaaacctcgt cccctccag gagtccctg cacatacctt ctccatcgtg tcagctgtgt  
 960

ttctcttgat tccgtgacac ccggtttatt agttcaaaag tgtgacacct tttctgggca  
 1020  
 aggaacagcc cctttaagga gcaaactcact tctgtcacag ttattatggt aatatgaggc  
 1080  
 aatctgatta gcttcacaga ctgagtctcc acaacaccaa aatatccaga tgtaaaccac  
 1140  
 aaacttgtag acaaaagaaa gcacagattg tttacctgtt gtggatttta gatgtaacaa  
 1200  
 atgtttatac aaatacatat atgtacacca tgtttcaaact actaaataaa tagagtttaa  
 1260  
 tgcc  
 1264

<210> 4370

<211> 322

<212> PRT

<213> Homo sapiens

<400> 4370

Ala	Gln	Leu	Ala	Asn	Pro	Glu	Ile	Pro	Leu	Gly	Ser	Ala	Glu	Gln	Phe
1				5					10					15	
Leu	Leu	Thr	Leu	Ser	Ser	Ile	Ser	Glu	Leu	Ser	Ala	Arg	Leu	His	Leu
			20					25					30		
Trp	Ala	Phe	Lys	Met	Asp	Tyr	Glu	Thr	Thr	Glu	Lys	Glu	Val	Ala	Glu
		35					40					45			
Pro	Leu	Leu	Asp	Leu	Lys	Glu	Gly	Ile	Asp	Gln	Leu	Glu	Asn	Asn	Lys
	50					55					60				
Thr	Leu	Gly	Phe	Ile	Leu	Ser	Thr	Leu	Leu	Ala	Ile	Gly	Asn	Phe	Leu
65					70					75				80	
Asn	Gly	Thr	Asn	Ala	Lys	Ala	Phe	Glu	Leu	Ser	Tyr	Leu	Glu	Lys	Val
			85						90					95	
Pro	Glu	Val	Lys	Asp	Thr	Val	His	Lys	Gln	Ser	Leu	Leu	His	His	Val
		100						105					110		
Cys	Thr	Met	Val	Val	Glu	Asn	Phe	Pro	Asp	Ser	Ser	Asp	Leu	Tyr	Ser
		115					120					125			
Glu	Ile	Gly	Ala	Ile	Thr	Arg	Ser	Ala	Lys	Val	Asp	Phe	Asp	Gln	Leu
	130					135					140				
Gln	Asp	Asn	Leu	Cys	Gln	Met	Glu	Arg	Arg	Cys	Lys	Ala	Ser	Trp	Asp
145				150						155				160	
His	Leu	Lys	Ala	Ile	Ala	Lys	His	Glu	Met	Lys	Pro	Val	Leu	Lys	Gln
			165						170					175	
Arg	Met	Ser	Glu	Phe	Leu	Lys	Asp	Cys	Ala	Glu	Arg	Ile	Ile	Ile	Leu
		180						185					190		
Lys	Ile	Val	His	Arg	Arg	Ile	Ile	Asn	Arg	Phe	His	Ser	Phe	Leu	Leu
		195					200					205			
Phe	Met	Gly	His	Pro	Pro	Tyr	Ala	Ile	Arg	Glu	Val	Asn	Ile	Asn	Lys
	210					215					220				
Phe	Cys	Arg	Ile	Ile	Ser	Glu	Phe	Ala	Leu	Glu	Tyr	Arg	Thr	Thr	Arg
225					230					235				240	
Glu	Arg	Val	Leu	Gln	Lys	Gln	Lys	Arg	Ala	Asn	His	Arg	Glu	Arg	
			245					250					255		
Asn	Lys	Thr	Arg	Gly	Lys	Met	Ile	Thr	Asp	Ser	Gly	Lys	Phe	Ser	Gly
		260						265					270		
Ser	Ser	Pro	Ala	Pro	Pro	Ser	Gln	Pro	Gln	Gly	Leu	Ser	Tyr	Ala	Glu

<400> 4372  
Thr Phe Lys Met Ala Glu Cys Gly Ala Ser Gly Ser Gly Ser Ser Gly

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<210> 4373
<211> 1017
<212> DNA
<213> Homo sapiens
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<400> 4373
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120
ggagtgtgtg agaggaggga gcaaaaagct caccctaaaa cattttatttc aaggagaaaa
180
gaaaaagggg gggcgcaaaa atggctgggg caattataga aaacatgagc accaagaagc
240
tgtgcattgt tgggtgggatt ctgctcgtgt tccaaatcat cgccctttctg gtggggaggct
300
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tgattgctcc agggcccaca acggcagtgt cctacatgtc ggtgaaatgt gtggatgccc  
 360  
 gtaagaacca tcacaagaca aaatgggttcg tgccttgggg acccaatcat tgtgacaaga  
 420  
 tccgagacat tgaagaggca attccaaggg aaattgaagc caatgacatc gtgttttctg  
 480  
 ttcacattcc cctccccac atggagatga gtccttggtt ccaattcatg ctgtttatcc  
 540  
 tgcagctgga cattgccttc aagctaaaca accaaatcag agaaaatgca gaagtctcca  
 600  
 tggacgtttc cctggcttac cgtgatgacg cgtttgctga gtggactgaa atggcccatg  
 660  
 aaagagtacc acggaaactc aaatgcacct tcacatctcc caagactcca gagcatgagg  
 720  
 gccgttacta tgaatgtgat gtccttcttc tcatggaaat tgggtctgtg gcccataagt  
 780  
 ttacctttt aaacatccgg ctgcctgtga atgagaagaa gaaaatcaat gtgggaattg  
 840  
 gggagataaa ggatatccgg ttgggtgggga tccacaaaaa tggaggcttc accaagggtg  
 900  
 gggttgccat gaagaccttc cttacgcca gcattctcat cattatggtg tggattgga  
 960  
 ggaggatcac catgatgtcc cgacccccag tgcttctgga aaaagtcac tttgccc  
 1017

&lt;210&gt; 4374

&lt;211&gt; 272

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4374

Met	Ala	Gly	Ala	Ile	Ile	Glu	Asn	Met	Ser	Thr	Lys	Lys	Leu	Cys	Ile
1				5					10					15	
Val	Gly	Gly	Ile	Leu	Leu	Val	Phe	Gln	Ile	Ile	Ala	Phe	Leu	Val	Gly
			20					25					30		
Gly	Leu	Ile	Ala	Pro	Gly	Pro	Thr	Thr	Ala	Val	Ser	Tyr	Met	Ser	Val
		35					40					45			
Lys	Cys	Val	Asp	Ala	Arg	Lys	Asn	His	His	Lys	Thr	Lys	Trp	Phe	Val
	50					55					60				
Pro	Trp	Gly	Pro	Asn	His	Cys	Asp	Lys	Ile	Arg	Asp	Ile	Glu	Glu	Ala
65					70				75					80	
Ile	Pro	Arg	Glu	Ile	Glu	Ala	Asn	Asp	Ile	Val	Phe	Ser	Val	His	Ile
			85						90					95	
Pro	Leu	Pro	His	Met	Glu	Met	Ser	Pro	Trp	Phe	Gln	Phe	Met	Leu	Phe
		100						105					110		
Ile	Leu	Gln	Leu	Asp	Ile	Ala	Phe	Lys	Leu	Asn	Asn	Gln	Ile	Arg	Glu
	115							120				125			
Asn	Ala	Glu	Val	Ser	Met	Asp	Val	Ser	Leu	Ala	Tyr	Arg	Asp	Asp	Ala
	130					135					140				
Phe	Ala	Glu	Trp	Thr	Glu	Met	Ala	His	Glu	Arg	Val	Pro	Arg	Lys	Leu
145					150				155					160	
Lys	Cys	Thr	Phe	Thr	Ser	Pro	Lys	Thr	Pro	Glu	His	Glu	Gly	Arg	Tyr
			165					170						175	
Tyr	Glu	Cys	Asp	Val	Leu	Pro	Phe	Met	Glu	Ile	Gly	Ser	Val	Ala	His



				180					185					190			
Lys	Phe	Tyr	Leu	Leu	Asn	Ile	Arg	Leu	Pro	Val	Asn	Glu	Lys	Lys	Lys		
				195					200					205			
Ile	Asn	Val	Gly	Ile	Gly	Glu	Ile	Lys	Asp	Ile	Arg	Leu	Val	Gly	Ile		
				210					215					220			
His	Gln	Asn	Gly	Gly	Phe	Thr	Lys	Val	Trp	Phe	Ala	Met	Lys	Thr	Phe		
225					230					235					240		
Leu	Thr	Pro	Ser	Ile	Phe	Ile	Ile	Met	Val	Trp	Tyr	Trp	Arg	Arg	Ile		
				245						250					255		
Thr	Met	Met	Ser	Arg	Pro	Pro	Val	Leu	Leu	Glu	Lys	Val	Ile	Phe	Ala		
				260					265					270			

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<210> 4375
<211> 1966
<212> DNA
<213> Homo sapiens
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<210> 4376

<211> 399

<212> PRT

<213> Homo sapiens

<400> 4376

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Val	Pro	His	Ser	Ser	Ser	Thr	Phe	Arg	Leu	Thr	Ala	Ser	Phe	Gly	Arg
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Ala	Gly	Pro	Gly	Met	Leu	His	Thr	Thr	Gln	Leu	Tyr	Gln	His	Val	Pro
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Glu	Thr	Arg	Trp	Pro	Ile	Val	Tyr	Ser	Pro	Arg	Tyr	Asn	Ile	Thr	Phe
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Val	Glu	Ala	Arg	Glu	Ala	Ser	Glu	Glu	Asp	Leu	Leu	Val	Val	His	Thr
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Lys Val Leu Arg Pro Leu Arg Thr Gln Thr Gly Gly Thr Ile Met Ala		160
	165	170
Gly Lys Leu Ala Val Glu Arg Gly Trp Ala Ile Asn Val Gly Gly Gly		175
	180	185
Phe His His Cys Ser Ser Asp Arg Gly Gly Gly Phe Cys Ala Tyr Ala		190
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Asp Ile Thr Leu Ala Ile Lys Phe Leu Phe Glu Arg Val Glu Gly Ile		205
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Ser Arg Ala Thr Ile Ile Asp Leu Asp Ala His Gln Gly Asn Gly His		220
225	230	235
Glu Arg Asp Phe Met Asp Asp Lys Cys Val Thr Cys Met Asp Val Tyr		240
	245	250
Asn Arg His Ile Tyr Pro Gly Asp Arg Phe Ala Lys Gln Ala Ile Arg		255
	260	265
Arg Lys Val Glu Leu Glu Trp Gly Thr Glu Asp Asp Glu Tyr Leu Asp		270
	275	280
Lys Val Glu Arg Asn Ile Lys Lys Ser Leu Gln Glu His Leu Pro Asp		285
	290	295
Val Val Val Tyr Asn Ala Gly Thr Asp Ile Leu Glu Gly Asp Arg Leu		300
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Gly Gly Leu Ser Ile Ser Pro Ala Gly Ile Val Lys Arg Asp Glu Leu		320
	325	330
Val Phe Arg Met Val Arg Gly Arg Arg Val Pro Ile Leu Met Val Thr		335
	340	345
Ser Gly Gly Tyr Gln Lys Arg Thr Ala Arg Ile Ile Ala Asp Ser Ile		350
	355	360
Leu Asn Leu Phe Gly Leu Gly Leu Ile Gly Pro Glu Ser Pro Ser Val		365
	370	375
Ser Ala Gln Asn Ser Asp Thr Pro Leu Leu Pro Pro Ala Val Pro		380
385	390	395

&lt;210&gt; 4377

&lt;211&gt; 812

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4377

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&lt;210&gt; 4378

&lt;211&gt; 233

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4378

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Ser	Met	Arg	Glu	His	Pro	Ala	Leu	Arg	Ser	Leu	Arg	Leu	Leu	Thr	Leu
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&lt;210&gt; 4379

&lt;211&gt; 2347

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4379

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&lt;210&gt; 4380

&lt;211&gt; 652

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4380

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			20					25					30		
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Ala	Gln	Thr	Ser	Val	Leu	His	Arg	Glu	Asp	Leu	Glu	Arg	Leu	Gly	Val
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Gln	Glu	Ser	Asp	Leu	Arg	Leu	Phe	Leu	Asp	Gly	Asp	Ile	Leu	Arg	Gln
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Gln	Phe	Leu	Thr	Ala	Leu	Phe	Tyr	Thr	Leu	Glu	Lys	Glu	Glu	Glu	Glu
			100					105					110		
Asp	Arg	Asp	Gly	His	Thr	Trp	Asp	Ile	Gly	Asp	Val	Gln	Lys	Leu	Leu
			115				120					125			
Ser	Gly	Val	Glu	Arg	Leu	Arg	Asn	Pro	Asp	Leu	Ile	Gln	Ala	Gly	Tyr

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 210 215 220  
 Asp Val Val Pro Ser Ser Phe Cys Val Lys His Cys Arg Asn Leu Gln  
 225 230 235 240  
 Lys Met Ser Leu Gln Val Ile Lys Glu Asn Leu Pro Glu Asn Val Thr  
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 260 265 270  
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 Glu Lys Ser Ser Leu Leu Cys Leu Asp Leu Gly Leu Asn His Ile Gly  
 515 520 525  
 Val Lys Gly Met Lys Phe Leu Cys Glu Ala Leu Arg Lys Pro Leu Cys  
 530 535 540  
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 545 550 555 560  
 Cys Glu Asp Val Cys Ser Ala Leu Ser Cys Asn Gln Ser Leu Val Thr

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Lys	Ile	Asp	Asp	Phe	Asn	Asp	Glu	Leu	Asn	Lys	Leu	Leu	Glu	Glu	Ile		
	610					615					620						
Glu	Glu	Lys	Asn	Pro	Gln	Leu	Ile	Ile	Asp	Thr	Glu	Lys	His	His	Pro		
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&lt;210&gt; 4381

&lt;211&gt; 1638

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4381

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<210> 4382

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<213> Homo sapiens

<400> 4382

Met	Ala	Gln	Tyr	Lys	Gly	Thr	Met	Arg	Glu	Ala	Gly	Arg	Ala	Met	His
1				5					10					15	
Leu	Leu	Lys	Lys	Arg	Glu	Arg	Gln	Arg	Glu	Gln	Met	Glu	Val	Leu	Lys
			20				25						30		
Gln	Arg	Ile	Ala	Glu	Glu	Thr	Ile	Leu	Lys	Ser	Gln	Val	Asp	Lys	Arg
		35				40						45			
Phe	Ser	Ala	His	Tyr	Asp	Ala	Val	Glu	Ala	Glu	Leu	Lys	Ser	Ser	Ala
		50				55					60				
Val	Gly	Leu	Val	Thr	Leu	Asn	Asp	Met	Lys	Ala	Arg	Gln	Glu	Ala	Leu
65					70				75					80	
Val	Arg	Glu	Arg	Glu	Arg	Gln	Leu	Ala	Lys	Arg	Gln	His	Leu	Glu	Glu
			85						90				95		
Gln	Arg	Leu	Gln	Gln	Glu	Arg	Gln	Arg	Glu	Gln	Glu	Gln	Arg	Arg	Glu
		100					105						110		
Arg	Lys	Arg	Lys	Ile	Ser	Cys	Leu	Ser	Phe	Ala	Leu	Asp	Asp	Leu	Asp
		115					120					125			
Asp	Gln	Ala	Asp	Ala	Ala	Glu	Ala	Arg	Arg	Ala	Gly	Asn	Leu	Gly	Lys
		130				135					140				
Asn	Pro	Asp	Val	Asp	Thr	Ser	Phe	Leu	Pro	Asp	Arg	Asp	Arg	Glu	Glu
145					150				155					160	
Glu	Glu	Asn	Arg	Leu	Arg	Glu	Glu	Leu	Arg	Gln	Glu	Trp	Glu	Ala	Gln
			165					170					175		
Arg	Glu	Lys	Val	Lys	Asp	Glu	Glu	Met	Glu	Val	Thr	Phe	Ser	Tyr	Trp
		180					185					190			
Asp	Gly	Ser	Gly	His	Arg	Arg	Thr	Val	Arg	Val	Arg	Lys	Gly	Asn	Thr
		195				200					205				
Val	Gln	Gln	Phe	Leu	Lys	Lys	Ala	Leu	Gln	Gly	Leu	Arg	Lys	Asp	Phe

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      210      215      220
Leu Glu Leu Arg Ser Ala Gly Val Glu Gln Leu Met Phe Ile Lys Glu
225      230      235      240
Asp Leu Ile Leu Pro His Tyr His Thr Phe Tyr Asp Phe Ile Ile Ala
      245      250      255
Arg Ala Arg Gly Lys Ser Gly Pro Leu Phe Ser Phe Asp Val His Asp
      260      265      270
Asp Val Arg Leu Leu Ser Asp Ala Thr Met Glu Lys Asp Glu Ser His
      275      280      285
Ala Gly Lys Val Val Leu Arg Ser Trp Tyr Glu Lys Asn Lys His Ile
      290      295      300
Phe Pro Ala Ser Arg Trp Glu Ala Tyr Asp Pro Glu Lys Lys Trp Asp
305      310      315      320
Lys Tyr Thr Ile Arg
      325

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<210> 4383  
 <211> 419  
 <212> DNA  
 <213> Homo sapiens

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<400> 4383
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60
aaaatgaaat ataaagcgcc cactgactat tgctttgttt taaagcacc ccaaattcag
120
aaggagtccc agtatatcaa gtatctctgc tgtgatgaca caagaaccct taaccagtgg
180
gtcatgggaa tacggatagc caagtatggg aagactctct atgataacta ccagcgggct
240
gtggcaaagg ctggacttgc ctctcgggtg acaaacttgg ggacagtcaa tgcagctgca
300
ccagctcagc catttacagg acctaaaaca ggcaccaccc agcccaatgg acagattccc
360
caggctacac atttcttcag tgctgttctc caagaagccc agagacatgc tgaaaactn
419

```

<210> 4384  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

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<400> 4384
Arg Asp Leu Ala Cys Phe Ile Gln Phe Glu Asn Val Asn Ile Tyr Tyr
1      5      10      15
Gly Thr Gln His Lys Met Lys Tyr Lys Ala Pro Thr Asp Tyr Cys Phe
      20      25      30
Val Leu Lys His Pro Gln Ile Gln Lys Glu Ser Gln Tyr Ile Lys Tyr
      35      40      45
Leu Cys Cys Asp Asp Thr Arg Thr Leu Asn Gln Trp Val Met Gly Ile
      50      55      60
Arg Ile Ala Lys Tyr Gly Lys Thr Leu Tyr Asp Asn Tyr Gln Arg Ala
      65      70      75      80
Val Ala Lys Ala Gly Leu Ala Ser Arg Trp Thr Asn Leu Gly Thr Val

```

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      85          90          95
Asn Ala Ala Ala Pro Ala Gln Pro Phe Thr Gly Pro Lys Thr Gly Thr
      100          105          110
Thr Gln Pro Asn Gly Gln Ile Pro Gln Ala Thr His Phe Phe Ser Ala
      115          120          125
Val Leu Gln Glu Ala Gln Arg His Ala Glu Asn
      130          135

```

<210> 4385  
 <211> 754  
 <212> DNA  
 <213> Homo sapiens

```

<400> 4385
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60
tcccggtctgc tcaagcgggt gggaaggagc ggccactctt gctgaaagggt ggctgggaga
120
ggtcctgggtc agagtctggag tcagagtccc aggaggggag tggagggctc aggcactgggt
180
gccccttggtg gcctcttagg ctcgaggcct tgggacaggc ccccgagcac aaagtgaggc
240
tgtctatgga gttctgcagc acgtgcacag cagaccatat atcactcagt tccttctgga
300
ggtcatectt ccagcagcca ctggctccct gcggtatctc ttcagtctcc ggacaggcgg
360
ctgtctcatg accctgctgc ttcatcttgg tcaggatttt gcggcatttc acctgcgttt
420
tctgcatttt ctgaatgttc accaagttct ctgagatctc atcctctctgc gttcttcaa
480
gctgctgaat cttgatttgc tgcaagcagc tctccttctc caacatgggt actgagtgggt
540
tcaggaaactc gaaagccttg gtctgggcct gtaactgggt cttgagtgtac ccaagttcac
600
atcgaggag cttctgggag tcgggaatca tcacaatggt cttggctttg actttggaag
660
agctgggtctc caagggtctc acataccacc tgttcatgct ctcccatcag ggaccacgaa
720
gaaagtcctc agctgtgacg ctgaagtttg atca
754

```

<210> 4386  
 <211> 85  
 <212> PRT  
 <213> Homo sapiens

```

<400> 4386
Gly Cys Leu Trp Ser Ser Ala Ala Arg Ala Gln Gln Thr Ile Tyr His
1          5          10          15
Ser Val Pro Ser Gly Gly His Pro Ser Ser Ser His Trp Leu Pro Ala
20          25          30
Val Ser Leu Gln Ser Pro Asp Arg Arg Leu Ser His Asp Pro Ala Ala
35          40          45
Ser Ser Trp Ser Gly Phe Cys Gly Ile Ser Pro Ala Phe Ser Ala Phe

```

<400> 4389

nggtgttttt cgggctgccg tacagcgaag agcgcgtgct gaagagttgc gcgtggcgctg  
60  
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120  
ccagcgggtgt acggcgattc tgcccgtgag aaggcattgc gtggagctct gcgagcctcc  
180  
gtggaacgac gcctgagtcg ccacgacgtc gtcacctcgg actcgcttaa ctacatcaaa  
240  
ggtttccgtt acgagctcta ctgcctggca cgggcggcgc gcaccccgct ctgcctggtc  
300  
tactgcgtac ggcccggcgg cccgatcgcg ggacctcagg tggcgggcgc gaacgagaac  
360  
cctggccgga acgtcagtgt gagtggcgg ccacgcgctg aggaggacgg gagagcccag  
420  
gcggcgggca gcagcgtcct cagggaactg catactcggg actctgtagt aaatggaagt  
480  
gccagggccg acgtacccaa ggaactggag cgagaagaat ccggggctgc ggagtctcca  
540  
gctcttgtga ctccgattc agagaaatct gcaaagcatg ggtccgggtgc cttttactct  
600  
cccgaactcc tggaggccct aacgctgcgc tttgaggtc ccgattctcg gaatcgctgg  
660  
gaccggcctt tattcacttt ggtgggcata gaggagccgt tgccccggc ggggatccgc  
720  
tctgccctgt ttgagaaccg ggccccacca ccccatcagt ctacgcagtc ccagcccctc  
780  
gcctccggca gctttctgca ccagttggac caggtcacga gtcaagtact ggccggattg  
840  
atggaagcgc agaagagcgc tgtccccggg gacttgctca cgcttcctgg taccacagag  
900  
cacttgcggt ttaccggcc cttgaccatg gcagaactga gtcgccttcg tcgccagttt  
960  
atttcgtaca ctaaaatgca tccaacaat gagaacttgc cgcaactggc caacatgttt  
1020  
cttcagtatt tgagccagag cctgcactaa ccagaggagg taggggggaa gccatggctt  
1080  
ctgatctcca ctccacttta tttctctggg aaaaataggc tgcaggtctc cagagcatat  
1140  
cgatgcagta ctgtactaga gctgttgta ctgattcact caaactttcc tgcatacccc  
1200  
tgtgccaggc cttgggttta cagcataagt tcagactaaa gagaatggag aactattgtg  
1260  
gtgcaacctg gcaaatccct cagaggacag agctaagggtg gacagggatt acctagattg  
1320  
gacctaactt gggctatcac agagcattga ccattggctt ccctcatctg aggcgtggga  
1380  
gagcagactg gatagatgag aattgtttta aaacaattgt gaacagaaac tgaagatggt  
1440  
acagttctac atctgcacct gccctttttt cataccacaa agtatTTTT tgagtactgt  
1500  
actgactttt tgctagtttc tattctggga ccgagttcac agataaatcc attggtttgt  
1560  
atccttgaga aactttgttt ttgtggaagt aagaaagtta tctactagat tatttcctct  
1620

aataaaaatct tttaaaatag tctactggaa tctctttcac ttaatgttcc ctgtgtaact  
 1680  
 tcatgtaaca ttttaggtat acttgtcatt gttctgcctt taagtgaagt agtattttga  
 1740  
 tagttctgag agagtagatg ttttgagcta ctctacagta attatattat gacaatttcc  
 1800  
 gtaactgttt tgcttcattc tgcatttcaa ggcaaatatc attgtaagct tgtctttcat  
 1860  
 tcttcattga tttcattgaa caaatggtag gtacc  
 1895

<210> 4390

<211> 335

<212> PRT

<213> Homo sapiens

<400> 4390

Arg	Val	Ala	Arg	Gly	Val	Ala	Ala	Glu	Gly	Arg	Ala	Val	Tyr	Val	Val	15
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Asp	Asp	Ala	Ala	Val	Leu	Gly	Ala	Glu	Asp	Pro	Ala	Val	Tyr	Gly	Asp	30
		20						25								
Ser	Ala	Arg	Glu	Lys	Ala	Leu	Arg	Gly	Ala	Leu	Arg	Ala	Ser	Val	Glu	45
		35					40									
Arg	Arg	Leu	Ser	Arg	His	Asp	Val	Val	Ile	Leu	Asp	Ser	Leu	Asn	Tyr	60
		50				55					60					
Ile	Lys	Gly	Phe	Arg	Tyr	Glu	Leu	Tyr	Cys	Leu	Ala	Arg	Ala	Ala	Arg	80
65				70					75							
Thr	Pro	Leu	Cys	Leu	Val	Tyr	Cys	Val	Arg	Pro	Gly	Gly	Pro	Ile	Ala	95
			85						90							
Gly	Pro	Gln	Val	Ala	Gly	Ala	Asn	Glu	Asn	Pro	Gly	Arg	Asn	Val	Ser	110
			100					105								
Val	Ser	Trp	Arg	Pro	Arg	Ala	Glu	Glu	Asp	Gly	Arg	Ala	Gln	Ala	Ala	125
		115					120									
Gly	Ser	Ser	Val	Leu	Arg	Glu	Leu	His	Thr	Ala	Asp	Ser	Val	Val	Asn	140
		130					135									
Gly	Ser	Ala	Gln	Ala	Asp	Val	Pro	Lys	Glu	Leu	Glu	Arg	Glu	Glu	Ser	160
145				150					155							
Gly	Ala	Ala	Glu	Ser	Pro	Ala	Leu	Val	Thr	Pro	Asp	Ser	Glu	Lys	Ser	175
			165						170							
Ala	Lys	His	Gly	Ser	Gly	Ala	Phe	Tyr	Ser	Pro	Glu	Leu	Leu	Glu	Ala	190
			180					185								
Leu	Thr	Leu	Arg	Phe	Glu	Ala	Pro	Asp	Ser	Arg	Asn	Arg	Trp	Asp	Arg	205
		195					200									
Pro	Leu	Phe	Thr	Leu	Val	Gly	Ile	Glu	Glu	Pro	Leu	Pro	Pro	Ala	Gly	220
					215											
Ile	Arg	Ser	Ala	Leu	Phe	Glu	Asn	Arg	Ala	Pro	Pro	Pro	His	Gln	Ser	240
225				230					235							
Thr	Gln	Ser	Gln	Pro	Leu	Ala	Ser	Gly	Ser	Phe	Leu	His	Gln	Leu	Asp	255
			245						250							
Gln	Val	Thr	Ser	Gln	Val	Leu	Ala	Gly	Leu	Met	Glu	Ala	Gln	Lys	Ser	270
			260					265								
Ala	Val	Pro	Gly	Asp	Leu	Leu	Thr	Leu	Pro	Gly	Thr	Thr	Glu	His	Leu	285
		275					280									
Arg	Phe	Thr	Arg	Pro	Leu	Thr	Met	Ala	Glu	Leu	Ser	Arg	Leu	Arg	Arg	

290		295		300	
Gln Phe Ile Ser Tyr Thr Lys Met His Pro Asn Asn Glu Asn Leu Pro					
305		310		315	320
Gln Leu Ala Asn Met Phe Leu Gln Tyr Leu Ser Gln Ser Leu His					
	325		330		335

<210> 4391  
 <211> 988  
 <212> DNA  
 <213> Homo sapiens

<400> 4391  
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 60  
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 120  
 ggaggtggca tgcgaccccc acccaactcc ctgcgcggcc caggcctgcc tgccatgaac  
 180  
 atggggcccag gaggttcgtgg cccgtggggc agccccagtg gaaactcgat ccctactcc  
 240  
 tcctcatccc ccggcagcta caccggaccc ccaggaggag gtggggcccc tggaacaccc  
 300  
 atcatgccta gccctggaga ttccaccaac tccagcgaaa acatgtacac tatcatgaac  
 360  
 cccatcgggc agggcgccgg cagggttaat ttcccgtcgt gccctggccc ggaggggccc  
 420  
 atggccgcca tgagcgcgat ggagcctcac cacgtgaacg gatccctggg ctcgggcgac  
 480  
 atgggacgggt tgccgaagag ttcccccggc gccgtggccg gcctgagcaa cgccccgggc  
 540  
 accccgcggg acgacggcga gatggcggcc gccgggacct tcctgcaccc gttcccgcgc  
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 gaaagctact cgccagggat gaccatgagc gtgtgatggg gcggcagccc cgggcctctc  
 660  
 tgcgggccta ggcttctgcc cagcgcccct gctcaggggc aggggctgag gtcacacctc  
 720  
 gggcacctgg actcctggcc aatcaaggct tgcccagctg ggaggcccca cacgaaagac  
 780  
 tcttaccatt ttattaaaaa cgcaaggacc tcagagacgt tcttttctgt atggaccctt  
 840  
 cctgccattt gtattttgtc ccagagagaa aggtcttttg gggggcccct ctccccagga  
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 960  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaa  
 988

<210> 4392  
 <211> 211  
 <212> PRT  
 <213> Homo sapiens

<400> 4392  
 Xaa Pro Phe Ser Trp Pro His Gly Ala Ser Pro Arg Ala Gln Gly His

1 5 10 15  
 Pro Ser Met Gly Gly Pro Met Gln Arg Val Thr Pro Pro Arg Gly Met  
 20 25 30  
 Ala Ser Val Gly Pro Gln Ser Tyr Gly Gly Gly Met Arg Pro Pro Pro  
 35 40 45  
 Asn Ser Leu Ala Gly Pro Gly Leu Pro Ala Met Asn Met Gly Pro Gly  
 50 55 60  
 Val Arg Gly Pro Trp Ala Ser Pro Ser Gly Asn Ser Ile Pro Tyr Ser  
 65 70 75 80  
 Ser Ser Ser Pro Gly Ser Tyr Thr Gly Pro Pro Gly Gly Gly Gly Pro  
 85 90 95  
 Pro Gly Thr Pro Ile Met Pro Ser Pro Gly Asp Ser Thr Asn Ser Ser  
 100 105 110  
 Glu Asn Met Tyr Thr Ile Met Asn Pro Ile Gly Gln Gly Ala Gly Arg  
 115 120 125  
 Ala Asn Phe Pro Leu Gly Pro Gly Pro Glu Gly Pro Met Ala Ala Met  
 130 135 140  
 Ser Ala Met Glu Pro His His Val Asn Gly Ser Leu Gly Ser Gly Asp  
 145 150 155 160  
 Met Asp Gly Leu Pro Lys Ser Ser Pro Gly Ala Val Ala Gly Leu Ser  
 165 170 175  
 Asn Ala Pro Gly Thr Pro Arg Asp Asp Gly Glu Met Ala Ala Ala Gly  
 180 185 190  
 Thr Phe Leu His Pro Phe Pro Ser Glu Ser Tyr Ser Pro Gly Met Thr  
 195 200 205  
 Met Ser Val  
 210

&lt;210&gt; 4393

&lt;211&gt; 2171

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4393

gaggccaccc gccccggggc ctgggctcgc tgtggactcg tcatggcgac cgagcagagg  
 60  
 cctttccacc tgggtggtgtt cggcgcgtct ggcttcaccg gccagttcgt gaccgaggag  
 120  
 gtggcccgagg agcaggtgga cccggagcgg agtccctcgt ccctgggcgt ggcgggcccgc  
 180  
 tccccgggaga agctgcagcg ggtgctggag aaggcggccc tgaagctggg aagaccaaca  
 240  
 ctgtcatctg aagttggaat catcatctgt gatattgcta atccagcctc gcttgatgaa  
 300  
 atggctaaac aggcaacagt tgtcctcaat tgcgtaggac catatcggtt ttatggagaa  
 360  
 cctgtaataa aagcatgtat tgaaaatgga gccagttgta tcgacatcag tggagaacct  
 420  
 cagtttcttg aactaatgca actgaagtat catgagaaag ctgcagacaa aggggtttat  
 480  
 atcattggaa gcagcggcctt tgactccatt ccagcagatc tgggagtaat atataccaga  
 540  
 aataaaaatga atggtacttt gactgctgtg gaaagtttcc tgactataca ttcaggacct  
 600



gaggggttga gcattcatga tggtagctgg aagtcagcaa tttatggttt tggagatcag  
660  
agtaatttga gaaaactaag aaatgtatca aatctgaaac ctgtcccgtc cattgggtcca  
720  
aaattgaaga gaagggtggc aatttcttat tgtcgggaac tcaaaggta ttccattcct  
780  
tttatgggat ctgatgtgtc tgttgtaagg aggactcaac gttacttgta tgaaaattta  
840  
gaggaatcac cagttcagta tgctgcgtat gtaactgtgg gaggcacac ctctgttatt  
900  
aagctgatgt ttgcaggact tttctttttg ttctttgtga ggtttggaat tggaaggcaa  
960  
cttctcataa aattcccatg gttcttctcc tttggctatt tttcaaaaca aggcccaaca  
1020  
caaaaacaga ttgatgctgc ctcatcacg ctgacattct ttgggtcaagg atacagccaa  
1080  
ggcactggta cagataagaa caaaccaaat atcaaaattt gtactcaggt gaaaggacca  
1140  
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1200  
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1260  
acaaagttga ttgacagact caacaacac ggtattgagt ttagtgttat tagcagctct  
1320  
gaagtctaaa cactggaaga attaaactgaa gtcataacgt gcgtgaatta acagcttctc  
1380  
tatttgatat ttgaaattct tctgtaagcc tgtctgagt tatgtggaaa cgattgtcaa  
1440  
atctaaaata tctatatatt aaaaagtagg aaattgtcct agcttaccct aaatttcaa  
1500  
tctgagttga ttttgtgatt ttattgctta taacagagaa ctcatatttg acatattttt  
1560  
ttcattgatg tgttcctggg agattttcac gaatgagctg gcaggctcaa tgggggaggc  
1620  
ggcgtcccag tctgtgttgc agcagcattc tcatcggtgg tgcgcacacc atcgttactg  
1680  
tcgggcagta actgccgctt gccttgccgc agtaggaggg aaatctcacc ttccttcac  
1740  
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1800  
cgccaatcta cactgatttt ggactgttac ctaagttgaa aaataaaagg ttgtcaatcg  
1860  
aatgggtggt taatgtttgg acctgccgat gtatttgtat agtggtagaa acatgtctgt  
1920  
taagtggcct aacctgtttc ttgccaataa gtaggcttat cattttatct ttacgtaatt  
1980  
ctatatctgt gactaggttt ttaaggatac agcttataag ttgctatcaa ttttcactac  
2040  
ctaagcagaa tttttctcta atttactttt tgtattttta ctaggtttta catggaagcc  
2100  
ctaaaataag gcaaaagact ttttcttttg taataagcat ataataaaca cgtatataca  
2160  
tagcaaattg a  
2171

<210> 4394  
 <211> 428  
 <212> PRT  
 <213> Homo sapiens

<400> 4394  
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 Gly Phe Thr Gly Gln Phe Val Thr Glu Glu Val Ala Arg Glu Gln Val  
 20 25 30  
 Asp Pro Glu Arg Ser Ser Pro Ala Leu Gly Val Ala Gly Arg Ser Arg  
 35 40 45  
 Glu Lys Leu Gln Arg Val Leu Glu Lys Ala Ala Leu Lys Leu Gly Arg  
 50 55 60  
 Pro Thr Leu Ser Ser Glu Val Gly Ile Ile Ile Cys Asp Ile Ala Asn  
 65 70 75 80  
 Pro Ala Ser Leu Asp Glu Met Ala Lys Gln Ala Thr Val Val Leu Asn  
 85 90 95  
 Cys Val Gly Pro Tyr Arg Phe Tyr Gly Glu Pro Val Ile Lys Ala Cys  
 100 105 110  
 Ile Glu Asn Gly Ala Ser Cys Ile Asp Ile Ser Gly Glu Pro Gln Phe  
 115 120 125  
 Leu Glu Leu Met Gln Leu Lys Tyr His Glu Lys Ala Ala Asp Lys Gly  
 130 135 140  
 Val Tyr Ile Ile Gly Ser Ser Gly Phe Asp Ser Ile Pro Ala Asp Leu  
 145 150 155 160  
 Gly Val Ile Tyr Thr Arg Asn Lys Met Asn Gly Thr Leu Thr Ala Val  
 165 170 175  
 Glu Ser Phe Leu Thr Ile His Ser Gly Pro Glu Gly Leu Ser Ile His  
 180 185 190  
 Asp Gly Thr Trp Lys Ser Ala Ile Tyr Gly Phe Gly Asp Gln Ser Asn  
 195 200 205  
 Leu Arg Lys Leu Arg Asn Val Ser Asn Leu Lys Pro Val Pro Leu Ile  
 210 215 220  
 Gly Pro Lys Leu Lys Arg Arg Trp Pro Ile Ser Tyr Cys Arg Glu Leu  
 225 230 235 240  
 Lys Gly Tyr Ser Ile Pro Phe Met Gly Ser Asp Val Ser Val Val Arg  
 245 250 255  
 Arg Thr Gln Arg Tyr Leu Tyr Glu Asn Leu Glu Glu Ser Pro Val Gln  
 260 265 270  
 Tyr Ala Ala Tyr Val Thr Val Gly Gly Ile Thr Ser Val Ile Lys Leu  
 275 280 285  
 Met Phe Ala Gly Leu Phe Phe Leu Phe Phe Val Arg Phe Gly Ile Gly  
 290 295 300  
 Arg Gln Leu Leu Ile Lys Phe Pro Trp Phe Phe Ser Phe Gly Tyr Phe  
 305 310 315 320  
 Ser Lys Gln Gly Pro Thr Gln Lys Gln Ile Asp Ala Ala Ser Phe Thr  
 325 330 335  
 Leu Thr Phe Phe Gly Gln Gly Tyr Ser Gln Gly Thr Gly Thr Asp Lys  
 340 345 350  
 Asn Lys Pro Asn Ile Lys Ile Cys Thr Gln Val Lys Gly Pro Glu Ala  
 355 360 365  
 Gly Tyr Val Ala Thr Pro Ile Ala Met Val Gln Ala Ala Met Thr Leu

370	375	380
Leu Ser Asp Ala Ser His Leu Pro Lys Ala Gly Gly Val Phe Thr Pro		
385	390	395
Gly Ala Ala Phe Ser Lys Thr Lys Leu Ile Asp Arg Leu Asn Lys His		400
	405	410
Gly Ile Glu Phe Ser Val Ile Ser Ser Ser Glu Val		415
	420	425

&lt;210&gt; 4395

&lt;211&gt; 1893

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4395

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natgtgtccc caattcttga aggaaaaaga gagctgtggg cttccagggc gactcccttc
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120
ctttctcctc tgcaggcgct gaggatcacg catcctgtga ctctcccctg tcccccgcca
180
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1200

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&lt;210&gt; 4396

&lt;211&gt; 463

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4396

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Ile	Leu	Met	Ala	Lys	Glu	Arg	Leu	Glu	Ala	Leu	Arg	Thr	Ala	Phe	Glu
			20					25					30		
Ser	Gly	Asp	Leu	Pro	Gln	Ala	Ala	Ser	His	Leu	Gln	Glu	Leu	Leu	Ala
		35				40					45				
Ser	Thr	Glu	Ser	Ile	Arg	Leu	Glu	Val	Gly	Val	Thr	Gly	Glu	Ser	Gly
	50					55				60					
Ala	Gly	Lys	Ser	Ser	Leu	Ile	Asn	Ala	Leu	Arg	Gly	Leu	Glu	Ala	Glu
65					70				75					80	
Asp	Pro	Gly	Ala	Ala	Leu	Thr	Gly	Val	Met	Glu	Thr	Thr	Met	Gln	Pro
			85					90					95		
Ser	Pro	Tyr	Pro	His	Pro	Gln	Phe	Pro	Asp	Val	Thr	Leu	Trp	Asp	Leu
			100					105					110		
Pro	Gly	Ala	Gly	Ser	Pro	Gly	Cys	Pro	Ala	Asp	Lys	Tyr	Leu	Lys	Gln
		115				120						125			
Val	Asp	Phe	Ser	Arg	Tyr	Asp	Phe	Phe	Leu	Leu	Val	Ser	Pro	Arg	Arg
	130					135					140				
Cys	Gly	Ala	Val	Glu	Thr	Arg	Leu	Ala	Ala	Glu	Ile	Leu	Cys	Gln	Gly
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Lys	Lys	Phe	Tyr	Phe	Val	Arg	Thr	Lys	Val	Asp	Glu	Asp	Leu	Ala	Ala
			165					170					175		
Thr	Arg	Thr	Gln	Arg	Pro	Ser	Gly	Phe	Arg	Glu	Ala	Ala	Val	Leu	Gln

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      195      200      205
Asp Pro Arg Ile Phe Leu Val Ser Asn Leu Ser Pro Ala Arg Tyr Asp
      210      215      220
Phe Pro Thr Leu Val Ser Thr Trp Glu His Asp Leu Pro Ser His Arg
      225      230      235      240
Arg His Ala Gly Leu Leu Ser Leu Pro Asp Ile Ser Leu Glu Ala Leu
      245      250      255
Gln Lys Lys Lys Ala Met Leu Gln Glu Gln Val Leu Lys Thr Ala Leu
      260      265      270
Val Leu Gly Val Ile Gln Ala Leu Pro Val Pro Gly Leu Ala Ala Ala
      275      280      285
Tyr Asp Asp Ala Leu Leu Ile His Ser Leu Arg Gly Tyr His Arg Ser
      290      295      300
Phe Gly Leu Asp Asp Asp Ser Leu Ala Lys Leu Ala Glu Gln Val Gly
      305      310      315      320
Lys Gln Ala Gly Asp Leu Arg Ser Val Ile Arg Ser Pro Leu Ala Asn
      325      330      335
Glu Val Ser Pro Glu Thr Val Leu Arg Leu Tyr Ser Gln Ser Ser Asp
      340      345      350
Gly Ala Met Arg Val Ala Arg Ala Phe Glu Arg Gly Ile Pro Val Phe
      355      360      365
Gly Thr Leu Val Ala Gly Gly Ile Ser Phe Gly Ala Val Tyr Thr Met
      370      375      380
Leu Gln Gly Cys Leu Asn Glu Met Ala Glu Asp Ala Gln Arg Val Arg
      385      390      395      400
Ile Lys Ala Leu Glu Asp Asp Glu Pro Gln Pro Glu Val Ser Leu Glu
      405      410      415
Val Ala Ser Asp Asn Gly Val Glu Lys Gly Gly Ser Gly Glu Gly Gly
      420      425      430
Gly Glu Glu Ala Pro Leu Ser Thr Cys Arg Lys Leu Gly Leu Leu Leu
      435      440      445
Lys Tyr Ile Leu Asp Ser Trp Lys Lys His Asp Ser Glu Glu Lys
      450      455      460

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&lt;210&gt; 4397

&lt;211&gt; 2543

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4397

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180
gataagtact gcccctctta caacaagagt cctcaatcca acagcccagt gcttctgtct
240
cgactgcact ttgagaagga tgcagactca tctgagcgta tcattgctcc catgcgctgg
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360

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1980

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&lt;210&gt; 4398

&lt;211&gt; 354

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4398

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Ala	Cys	Ala	Tyr	Gln	Asp	Arg	Arg	Gly	Gln	Gln	Arg	Leu	Pro	Glu	Trp
			20					25					30		
Arg	Asp	Pro	Asp	Lys	Tyr	Cys	Pro	Ser	Tyr	Asn	Lys	Ser	Pro	Gln	Ser
			35				40					45			
Asn	Ser	Pro	Val	Leu	Leu	Ser	Arg	Leu	His	Phe	Glu	Lys	Asp	Ala	Asp
			50			55					60				
Ser	Ser	Glu	Arg	Ile	Ile	Ala	Pro	Met	Arg	Trp	Gly	Leu	Val	Pro	Ser
					70					75				80	
Trp	Phe	Lys	Glu	Ser	Asp	Pro	Ser	Lys	Leu	Gln	Phe	Asn	Thr	Thr	Asn
				85					90					95	
Cys	Arg	Ser	Asp	Thr	Val	Met	Glu	Lys	Arg	Ser	Phe	Lys	Val	Pro	Leu
			100					105					110		
Gly	Lys	Gly	Arg	Arg	Cys	Val	Val	Leu	Ala	Asp	Gly	Phe	Tyr	Glu	Trp
			115				120					125			
Gln	Arg	Cys	Gln	Gly	Thr	Asn	Gln	Arg	Gln	Pro	Tyr	Phe	Ile	Tyr	Phe
						135					140				
Pro	Gln	Ile	Lys	Thr	Glu	Lys	Ser	Gly	Ser	Ile	Gly	Ala	Ala	Asp	Ser
						150				155				160	
Pro	Glu	Asn	Trp	Glu	Lys	Val	Trp	Asp	Asn	Trp	Arg	Leu	Leu	Thr	Met
				165				170						175	
Ala	Gly	Ile	Phe	Asp	Cys	Trp	Glu	Pro	Pro	Glu	Gly	Gly	Asp	Val	Leu
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Tyr	Ser	Tyr	Thr	Ile	Ile	Thr	Val	Asp	Ser	Cys	Lys	Gly	Leu	Ser	Asp
				195			200					205			
Ile	His	His	Arg	Met	Pro	Ala	Ile	Leu	Asp	Gly	Glu	Glu	Ala	Val	Ser

210	215	220
Lys Trp Leu Asp Phe Gly Glu Val Ser Thr Gln Glu Ala Leu Lys Leu		
225	230	235
Ile His Pro Thr Glu Asn Ile Thr Phe His Ala Val Ser Ser Val Val		240
	245	250
Asn Asn Ser Arg Asn Asn Thr Pro Glu Cys Leu Ala Pro Val Asp Leu		255
	260	265
Val Val Lys Lys Glu Leu Arg Ala Ser Gly Ser Ser Gln Arg Met Leu		270
	275	280
Gln Trp Leu Ala Thr Lys Ser Pro Lys Lys Glu Asp Ser Lys Thr Pro		285
	290	295
Gln Lys Glu Glu Ser Asp Val Pro Gln Trp Ser Ser Gln Phe Leu Gln		300
305	310	315
Lys Ser Pro Leu Pro Thr Lys Arg Gly Thr Ala Gly Leu Leu Glu Gln		320
	325	330
Trp Leu Lys Arg Glu Lys Glu Glu Glu Pro Val Ala Lys Arg Pro Tyr		335
	340	345
		350
Ser Gln		

&lt;210&gt; 4399

&lt;211&gt; 723

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4399

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723

&lt;210&gt; 4400



<211> 241  
 <212> PRT  
 <213> Homo sapiens

<400> 4400

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Leu Gly Val Gln Ala Gly Gln Thr Gln Lys Leu Leu Leu Gln Lys Glu
      35           40           45
Ala Leu Asp Glu Gln Leu Val Gln Val Lys Glu Ala Glu Arg His His
      50           55           60
Ser Ser Pro Lys Arg Glu Leu Pro Pro Gly Ile Gly Asp Met Val Glu
65           70           75           80
Leu Met Gly Val Gln Asp Gln His Met Asp Glu Arg Asp Val Arg Arg
      85           90           95
Phe Gln Leu Lys Ile Ala Glu Leu Asn Ser Val Ile Arg Lys Leu Glu
      100          105          110
Asp Arg Asn Thr Leu Leu Ala Asp Glu Arg Asn Glu Leu Leu Lys Arg
      115          120          125
Ser Arg Glu Thr Glu Val Gln Leu Lys Pro Leu Val Glu Lys Asn Lys
      130          135          140
Arg Met Asn Lys Lys Asn Glu Asp Leu Leu Gln Ser Ile Gln Arg Met
145          150          155          160
Glu Glu Lys Ile Lys Asn Leu Thr Arg Glu Asn Val Glu Met Lys Glu
      165          170          175
Lys Leu Ser Ala Gln Ala Ser Leu Lys Arg His Thr Ser Leu Asn Asp
      180          185          190
Leu Ser Leu Thr Arg Asp Glu Gln Glu Ile Glu Phe Leu Arg Leu Gln
      195          200          205
Val Leu Glu Gln Gln His Val Ile Asp Asp Leu Ser Leu Glu Arg Glu
      210          215          220
Arg Leu Leu Arg Ser Lys Arg His Arg Gly Lys Ser Leu Lys Pro Pro
225          230          235          240
Lys
  
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<210> 4401  
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 <212> DNA  
 <213> Homo sapiens

<400> 4401

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240
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 1131

&lt;210&gt; 4402

&lt;211&gt; 252

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4402

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 Ser Cys Asn Cys Tyr Met Glu Ala Leu Ala Leu Val Gly Ala Trp Tyr  
 20 25 30  
 Thr Ala Arg Lys Ser Ile Thr Val Ile Cys Asp Phe Tyr Ser Leu Ile  
 35 40 45  
 Arg Leu His Phe Ile Pro Arg Leu Gly Ser Arg Ala Asp Leu Ile Lys  
 50 55 60  
 Gln Tyr Gly Arg Trp Ala Val Val Ser Gly Ala Thr Asp Gly Ile Gly  
 65 70 75 80  
 Lys Ala Tyr Ala Glu Glu Leu Ala Ser Arg Gly Leu Asn Ile Ile Leu  
 85 90 95  
 Ile Ser Arg Asn Glu Glu Lys Leu Gln Val Val Ala Lys Asp Ile Ala  
 100 105 110  
 Asp Thr Tyr Lys Val Glu Thr Asp Ile Ile Val Ala Asp Phe Ser Ser  
 115 120 125  
 Gly Arg Glu Ile Tyr Leu Pro Ile Arg Glu Ala Leu Lys Asp Lys Asp  
 130 135 140  
 Val Gly Ile Leu Val Asn Asn Val Gly Val Phe Tyr Pro Tyr Pro Gln

145                      150                      155                      160  
 Tyr Phe Thr Gln Leu Ser Glu Asp Lys Leu Trp Asp Ile Ile Asn Val  
                                  165                      170                      175  
 Asn Ile Ala Ala Ala Ser Leu Met Val His Val Val Leu Pro Gly Met  
                                  180                      185                      190  
 Val Glu Arg Lys Lys Gly Ala Ile Val Thr Ile Ser Ser Gly Leu Leu  
                                  195                      200                      205  
 Leu Gln Pro Thr Pro Gln Leu Ala Ala Phe Ser Ala Ser Lys Ala Tyr  
                                  210                      215                      220  
 Leu Asp His Phe Ser Arg Ala Leu Gln Tyr Glu Tyr Ala Ser Lys Gly  
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<211> 4237

<212> DNA

<213> Homo sapiens

<400> 4403

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 120  
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 690 695 700  
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&lt;211&gt; 918

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<211> 405

<212> PRT

<213> Homo sapiens

<400> 4410

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Lys	Phe	Ser	Cys	Glu	Ile	Cys	Glu	Lys	Lys	Phe	Tyr	Thr	Met	Ala	His
		180					185					190			
Val	Arg	Lys	His	Met	Val	Ala	His	Thr	Lys	Asp	Met	Pro	Phe	Thr	Cys
	195					200					205				
Glu	Thr	Cys	Gly	Lys	Ser	Phe	Lys	Arg	Ser	Met	Ser	Leu	Lys	Val	His
	210					215				220					
Ser	Leu	Gln	His	Ser	Gly	Glu	Lys	Pro	Phe	Arg	Cys	Glu	Asn	Cys	Asp
225				230					235					240	
Glu	Arg	Phe	Gln	Tyr	Lys	Tyr	Gln	Leu	Arg	Ser	His	Met	Ser	Ile	His
			245					250						255	
Ile	Gly	His	Lys	Gln	Phe	Met	Cys	Gln	Trp	Cys	Gly	Lys	Asp	Phe	Asn
		260					265						270		
Met	Lys	Gln	Tyr	Phe	Asp	Glu	His	Met	Lys	Thr	His	Thr	Gly	Glu	Lys
	275					280						285			
Pro	Phe	Ile	Cys	Glu	Ile	Cys	Gly	Lys	Ser	Phe	Thr	Ser	Arg	Pro	Asn
	290					295				300					
Met	Lys	Arg	His	Arg	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Pro	Cys

```

305          310          315          320
Asp Val Cys Gly Gln Arg Phe Arg Phe Ser Asn Met Leu Lys Ala His
          325          330          335
Lys Glu Lys Cys Phe Arg Val Ser His Thr Leu Ala Gly Asp Gly Val
          340          345          350
Pro Ala Ala Pro Gly Leu Pro Pro Thr Gln Pro Gln Ala His Ala Leu
          355          360          365
Pro Leu Leu Pro Gly Leu Pro Gln Thr Leu Pro Pro Pro His Leu
          370          375          380
Pro Pro Pro Pro Pro Leu Phe Pro Thr Thr Ala Ser Pro Gly Gly Arg
385          390          395          400
Met Asn Ala Asn Asn
          405

```

<210> 4411  
 <211> 484  
 <212> DNA  
 <213> Homo sapiens

```

<400> 4411
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60
gtgtggagtg aatggggctg aaagggtagg gctggccac agagggtggg gaggtgcag
120
caaaagagga gtttaggtg gctatggtgc aggggcagct gtatgcttca cctcaaagt
180
tactgtcttc tctctccatc aaggaggaag ggcccaggct ggggttagga gggctagggg
240
cccaggctgt gtgtcccctt ttttctcct ggtgccctgc ccccccacgc tgtcatctcc
300
ctcagtggca gtgggggttc atcactgggt cttcaggctc cttgcccag gctggtgggt
360
ttccagggtg gcccaaccag gggggccctg cctctaggca gcgcgtagg ttccttgggc
420
agcctcaatc ctgccagcgc cagcatgtct ccctgcacag aagccatcaa gcacctttgg
480
atcc
484

```

<210> 4412  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

```

<400> 4412
Met Val Gln Gly Gln Leu Tyr Ala Ser Pro Gln Met Leu Leu Ser Ser
1          5          10          15
Leu Ser Ile Lys Glu Glu Gly Pro Arg Leu Gly Leu Gly Gly Leu Gly
20          25          30
Ala Gln Ala Val Cys Pro Leu Phe Ser Ser Trp Cys Pro Ala Pro Pro
35          40          45
Arg Cys His Leu Pro Gln Trp Gln Trp Gly Phe Ile Thr Gly Ser Ser
50          55          60
Gly Pro Leu Pro Met Ala Gly Gly Val Pro Gly Gly Pro Asn Gln Ala

```

[illegible]

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<210> 4413
<211> 1097
<212> DNA
<213> Homo sapiens
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<400> 4413
atggcgctgc tttttgcacg ttctttgcgc ttgtgccgct ggggagccaa acgattggga
60
gttgccctcca cagagcgcca gagaggcgct agtttcaaac tggaagaaaa aaccgcccac
120
agcagcctgg cactcttcag agatgatacg ggtgtcaa atggcttggt gggattggag
180
cccaccaagg tgccttgaat gtggagcgct tccgggagtt ggcagggtgct ggcagacaca
240
gcggtcacca gtggcagaca ctactgggaa gtgacagtga agcgctccca gcagttccgg
300
ataggagtgg cagatgtgga catgtcccgg gatagctgca ttggtgttga tgatcgttcc
360
tgggtgttca cctatgcccc gcgcaagtgg tacaccatgt tggccaacga gaaagcccc
420
gttgagggta ttgggcagcc agagaagggtg gggctgttgc tggagtatga ggcccagaag
480
ctgagcctgg tggatgtgag ccagggtctct gtggttcaca cgctacagac agatttcggg
540
ggtccagtgg tgctgcctt tgctctctgg gatggggagc tgctgacca ttcagggctt
600
gagggtgccc agggcctcta gtatgtccat tactggagtc cctaatacag cctttggcca
660
gcctcctttt gaaagtgtcc gaagcctttt tactttgcct caagcaacct ctagctccca
720
caattcagtg ttgggtcctc tgtgcaatat catgatcatc ttcctcatcc cctaccttgt
780
gaaagctagg catacagcca aaccctcctt tccccaccc accaactact gccaatttcc
840
taggctacca tgggtgtatc ttccttgacc tgcttccttc agtcctctg cctccctttg
900
cccaggcctt tctcagactg tattccatcc tggggtctta tcattcagct ttgtttgaat
960
ttattaatca ccatgatacc tctccctccc tttgtccaca tgtaacttgt tcttggggct
1020
ctaccagatg gctgaagagt aaatcctttc tacctctggc tgaaaaaaaa aaaaaaaaaa
1080
aaaaaaaaaa aaaaaaa
1097

```

<210> 4414

```
<210> 4416
<211> 100
<212> PRT
<213> Homo sapiens
```



&lt;400&gt; 4416

```

Met Lys Asn Ala Leu Gln Ala Trp Ser Ile Ile Thr Tyr Gly Ile Ser
 1           5           10           15
Cys Phe Lys Ile Ser Ser Asp Ile Tyr Leu Val Lys Phe His Phe Arg
      20           25           30
Arg Leu Arg Cys Arg Thr Leu Met Phe Ile Thr Ser Ser Tyr Pro Lys
      35           40           45
Arg Asn Gly Phe Arg His Val Leu Ser Gln Gln Glu Ile Asp Phe Phe
 50           55           60
Leu Asn Tyr Leu Ile Leu Leu Pro Asn Ile Thr Glu Val Met Arg Ser
65           70           75           80
Leu Val Thr Phe Gly Cys Cys Ala Leu Lys Glu Pro Gly Leu Glu Phe
      85           90           95
Val Gly Val Ile
      100

```

&lt;210&gt; 4417

&lt;211&gt; 980

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4417

```

nnacgcgtga gggaaaagca gaggcagttg gaggtagcgc aagttgaaaa ccagctgcta
60
aaaatgaagg tggaatcgtc ccaagaagcc aatgctgagg tgatgcgaga gatgaccaag
120
aagctgtaca gccagtatga ggagaagctg caggaagaac agaggaagca cagtgtgag
180
aaggaggctc ttttggaaga aaccaatagt tttctgaaag cgattgaaga agccaataaa
240
aagatgcaag cagcagagat cagcctagag gagaaagacc agaggatcgg ggagctggac
300
aggctgattg agcgcattga aaaggaacgt catcaactgc aacttcaact cctagaacat
360
gaaacagaaa tgtctgggga gttaactgat tctgacaagg aaaggatatca gcagttggag
420
gaggcatcag ccagcctccg tgagcggatc agacacctag atgacatggt gcattgccag
480
cagaagaaag tcaagcagat gggtgaggag attgagtcac taaagaaaaa agtgcaacag
540
aagcagctcc tgatactgca gcttttagaa aaaatctctt tcctggaagg agagaataat
600
gaactacaaa gcaggttgga ctatttgaca gaaaccagc ccaagactga agtggaaca
660
agagaaattg gagggtgctg tgatcttctt cccagcccaa caggcaggac tcgtgaaatt
720
gtgatgcctt ctaggaacta caccacatac acaagagtcc tggagttatc ctcaaagaaa
780
acgctgactt aggcactcag aggcatacac tttttacaga tggacaaaag ctctggaacc
840
ctgtggcttc aaatcctttg ggaagggtga ctgtgtttc ccctacacac agtgtaagcc
900
ggaatgggaa tcgctgaggc tctgatccac ttctaagaca ggaaggaaaag tgaaggcaga
960

```

gtgagcaggt aagagagga  
980

<210> 4418  
<211> 263  
<212> PRT  
<213> Homo sapiens

<400> 4418  
Xaa Arg Val Arg Glu Lys Gln Arg Gln Leu Glu Val Ala Gln Val Glu  
1 5 10 15  
Asn Gln Leu Leu Lys Met Lys Val Glu Ser Ser Gln Glu Ala Asn Ala  
20 25 30  
Glu Val Met Arg Glu Met Thr Lys Lys Leu Tyr Ser Gln Tyr Glu Glu  
35 40 45  
Lys Leu Gln Glu Glu Gln Arg Lys His Ser Ala Glu Lys Glu Ala Leu  
50 55 60  
Leu Glu Glu Thr Asn Ser Phe Leu Lys Ala Ile Glu Glu Ala Asn Lys  
65 70 75 80  
Lys Met Gln Ala Ala Glu Ile Ser Leu Glu Glu Lys Asp Gln Arg Ile  
85 90 95  
Gly Glu Leu Asp Arg Leu Ile Glu Arg Met Glu Lys Glu Arg His Gln  
100 105 110  
Leu Gln Leu Gln Leu Leu Glu His Glu Thr Glu Met Ser Gly Glu Leu  
115 120 125  
Thr Asp Ser Asp Lys Glu Arg Tyr Gln Gln Leu Glu Glu Ala Ser Ala  
130 135 140  
Ser Leu Arg Glu Arg Ile Arg His Leu Asp Asp Met Val His Cys Gln  
145 150 155 160  
Gln Lys Lys Val Lys Gln Met Val Glu Glu Ile Glu Ser Leu Lys Lys  
165 170 175  
Lys Val Gln Gln Lys Gln Leu Leu Ile Leu Gln Leu Leu Glu Lys Ile  
180 185 190  
Ser Phe Leu Glu Gly Glu Asn Asn Glu Leu Gln Ser Arg Leu Asp Tyr  
195 200 205  
Leu Thr Glu Thr Gln Ala Lys Thr Glu Val Glu Thr Arg Glu Ile Gly  
210 215 220  
Val Gly Cys Asp Leu Leu Pro Ser Pro Thr Gly Arg Thr Arg Glu Ile  
225 230 235 240  
Val Met Pro Ser Arg Asn Tyr Thr Pro Tyr Thr Arg Val Leu Glu Leu  
245 250 255  
Ser Ser Lys Lys Thr Leu Thr  
260

<210> 4419  
<211> 369  
<212> DNA  
<213> Homo sapiens

<400> 4419  
ngaattcctt gtatcgaaag tgccagaata cataactatatt attatgtatt tattctaaga  
60  
cagggtctctg ctctgntcac ccaggctgga gtgcagtggt gcgatcttgg ctactgcaa  
120

cctccgcctc cccagctcaa gcaactctcc tgccccagcc acccaagtnn aaattacagg  
 180  
 cccgtgccac cacacccggc caattttctgt atttttagta gagacggggg ttcaccatat  
 240  
 tggccaggac ggtctcaaac tcctggcccc atgtgaccc cccaccttgg cctcccaagg  
 300  
 tgctgggtatt acaggcgtga gccaccactg cgccctggcca gattttgctc ttttttgagc  
 360  
 agtctcagn  
 369

<210> 4420

<211> 91

<212> PRT

<213> Homo sapiens

<400> 4420

Xaa	Ile	Pro	Cys	Ile	Glu	Ser	Ala	Arg	Ile	His	Thr	Ile	Tyr	Tyr	Val
1				5					10					15	
Phe	Ile	Leu	Arg	Gln	Gly	Leu	Ala	Leu	Xaa	Thr	Gln	Ala	Gly	Val	Gln
		20						25					30		
Trp	Cys	Asp	Leu	Gly	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Gln	Leu	Lys	Gln
		35					40					45			
Leu	Ser	Cys	Pro	Ser	His	Pro	Ser	Xaa	Asn	Tyr	Arg	Pro	Val	Pro	Pro
	50					55					60				
His	Pro	Ala	Asn	Phe	Cys	Ile	Phe	Ser	Arg	Asp	Gly	Val	Ser	Pro	Tyr
65					70					75				80	
Trp	Pro	Gly	Arg	Ser	Gln	Thr	Pro	Gly	Pro	Met					
				85					90						

<210> 4421

<211> 1356

<212> DNA

<213> Homo sapiens

<400> 4421

nctggcagag tgtgagggaa gaggcgctaa tccctttccc atctggcctg gcctctcggg  
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 tgtggacacc aaatcccga ggggttgctg tagctatgcc cgtgggcatc cttgccctgg  
 120  
 ctgggggtgtg ctagagagag gaaagctgga ggaggagagc tgagctgggtg gttaccccat  
 180  
 gccaggaggg ccaaggcaag aagcctgcag cccagagat actgaccctg tccctgccc  
 240  
 tccagggcac aactgaacta acggaatggc ttaatcagat agctcgagaa ctgccactac  
 300  
 cactccctcc ctgcccactc ctcccaaagt ccacctgttc ccgcaagagt cccacctcac  
 360  
 aagcaaccac cagaggctga tacaaatggc cgctgtatgt ttgctaaagt gacagtgaca  
 420  
 cagataaggg aaagagctga ggggcaggac acatcagatg ggaaggggga gaccgtgcaa  
 480  
 aatggcagtc taacagaaaa tcctccttgt accaacagcc ccttccctcc caagttaggt  
 540

gagcccttgg gccagtgtat gggcagaaaa gcagatttgt gtccttcaga agggaaatgt  
 600  
 aaaaagggtga aagctctagt tgaagggcag tgagaggggc tggagtggga gagaaggctt  
 660  
 ctccctggccg gtggtctggg tgcagcaagg gcactctgag aaggcagaat ggaaacgcag  
 720  
 ggctggaggg gcatgggtac aggtttgggg gctctttcca gccttacta tgttgcccc  
 780  
 ttccccaag cccttacagg ggcagaagca cattccccgt gaccctgagt ctggcctcat  
 840  
 ttgggaagtc ttctggggtg tatggatgcc tgtgtgtgtg agtgagatgg gtgggggggc  
 900  
 acggctatct ggctctagca cactcatggg agaccagctc tgggaacaac aggatggggg  
 960  
 gctgggatgg gggtttaaga ggtctctgct agatatttct gaactgacct ccccagggtg  
 1020  
 ccaacctggc cttgggaaga gagtgcctag ggcagcgggg atggaaacct ttgcctgcag  
 1080  
 cataggtcca ggctcatgg ccctacacct tgacctctg actttgttgc cctggcctta  
 1140  
 agtacaaaaga ttctcactg cgtgctaaga aaacagatcc cgggccgggc ccggttgctc  
 1200  
 acacctataa tcccagcact ttggaaggct gaggcgggtg aatcacctga gatcaggagt  
 1260  
 tcgagaccag cctggccaac atggcaaac cctgtctcta ctaaaaacac aaaaatttgc  
 1320  
 cgggcatggt ggcagatgcc tgtaatccca gctact  
 1356

&lt;210&gt; 4422

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4422

Gly	Arg	Ala	Arg	Leu	Leu	Thr	Pro	Ile	Ile	Pro	Ala	Leu	Trp	Lys	Ala
1				5				10						15	
Glu	Ala	Gly	Glu	Ser	Pro	Glu	Ile	Arg	Ser	Ser	Arg	Pro	Ala	Trp	Pro
		20					25					30			
Thr	Trp	Gln	Asn	Pro	Val	Ser	Thr	Lys	Asn	Thr	Lys	Ile	Cys	Arg	Ala
		35				40					45				
Trp	Trp	Gln	Met	Pro	Val	Ile	Pro	Ala	Thr						
		50				55									

&lt;210&gt; 4423

&lt;211&gt; 2673

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4423

tccggaagtg gcttctgcga caacatgctt gcggacctcg gcttaatcgg aaccataggc  
 60  
 gaggatgacg aggtgccggt ggagcccag tctgactccg gggacgagga agaggagggg  
 120

ccattgtgc tgggcagacg acaaaaagct ttggggaaga accgcagtgc tgatttcaac  
180  
cctgatttcg ttttactga gaaggagggg acgtacgatg gcagctgggc cctggctgat  
240  
gtcatgagcc aactcaagaa gaaggaggca gccactacat tagatgagaa gattgagaaa  
300  
gttcgaaaga aaaggaaaac agaggataaa gaagccaagt ctgggaagtt ggaaaaggag  
360  
aaagaagcaa aggaaggctc tgaaccaagg gagcaggaag accttcaaga gaatgatgag  
420  
gaaggctcag aagatgaagc ctcgagact gactactcat cagctgatga gaacatcctc  
480  
accaaagcag atacactcaa agtaaaggat cggaagaaga agaagaaga aggacaggaa  
540  
gcaggaggat tttttgaaga tgcattctcag tacgatgaaa acctctcggt ccaggacatg  
600  
aacctttccc gccctcttct gaaggccatt acagccatgg gcttcaagca gccacccccg  
660  
atccagaagg cgtgcatacc tgtgggtcta ttggggaagg acatctgtgc ctgtgcagcc  
720  
actgggacag gtaaaactgc cgcctttgcc ctgcctgttt tggagcgtct gatttataaa  
780  
ccccgccagg ctccagtcac ccgcgtgctg gtgctagtgc ccacccgaga gctgggcac  
840  
caggtgcact ctgtcaccag acagctggcc cagttctgca acatcaccac ctgcctggct  
900  
gtgggcccgt tggatgtgaa gtctcaggaa gcagctcttc gggcagcgcc tgacatcctc  
960  
atcgccaccc caggccggct catcgatcac ctccacaact gcccttcctt ccacctgagc  
1020  
agcatcgagg tgctcactct ggacgaggct gacaggatgc tggatgagta ctttgaggag  
1080  
cagatgaagg agatcatccg aatgtgttcc caccaccgcc agaccatgct cttctcggcc  
1140  
accatgacag acgaggtgaa agatctggct tctgtctcct tgaagaatcc tgtccggata  
1200  
tttgtgaaca gcaacacaga tgtggctccc ttcttgccgc aggagtccat ccggatccgg  
1260  
cctaatacgtg aaggagaccg ggaagccatc gtggcagctt tgttgacgag gaccttact  
1320  
gaccatgtga tgctgttcac gaaaaccaag aagcaggccc accgcatgca catcctcctg  
1380  
gggctcatgg ggctgcaggt gggtgagctc catggcaact tgtcacagac gcagcggctg  
1440  
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1500  
gcccgaggac ttgacattga gggggtaaaa acggtaatca acttcacaat gcctaatacc  
1560  
atcaaacatt atgtccaccg ggtggggcga acagcacgtg ctggcagggc tgggcgctca  
1620  
gtctctctgg tgggagaaga tgagcggaag atgctgaagg agattgtaaa agctgccaag  
1680  
gccctgtga aggccaggat acttcccaaa gatgtcatcc tcaaattccg ggacaagatt  
1740

gagaaaatgg agaaagatgt gtatgcagtt ctgcagctag aggcggagga aaaagagatg  
 1800  
 cagcagtcag aagcccagat caatacagca aagcggctcc tggagaaggg gaaggaggca  
 1860  
 gtggtccaag agcccagag gagctgggtc cagaccaaag aagagaggaa gaaggagaaa  
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 1980  
 tttatgaagg atgccccaaa aaagggggag atgacagcag aggaaaggtc tcagtttgaa  
 2040  
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 2100  
 gcccagcaa tgcccagga ggagccagt agaggtcctg ccaagaagca aaagcagggg  
 2160  
 aagaaatctg tatttgatga agaactcacc aacacaagca agaaggccct gaaacagtat  
 2220  
 cgagctggcc cttcctttga agaaaggaaa cagttgggct tgccccacca gagacgagga  
 2280  
 ggaaacttta aatctaaatc caggtgatac tggtgtttt ggaggggcac atgttttggt  
 2340  
 attagagata aaaacctttc atggaaaaga agcttctcca tcctcattct ggtcttaact  
 2400  
 ctgattttct tacagataca agaggaggaa gtagctgtcg tggcctgaag aaattcatgg  
 2460  
 gggcagccct taaatccctt ccctgtggga agtcacctg gctgggtctgt cttttctcca  
 2520  
 tttgtttaaa aaaaaaacia aaacaaaaaa caacactttg gtgtggtggt atggtacgta  
 2580  
 gctattttcc taagcatgtc tgtcaatctc ccttcttgct gattagcttt catatgacta  
 2640  
 tattaatatg aagtattttt gggaaaagag aaa  
 2673

<210> 4424

<211> 768

<212> PRT

<213> Homo sapiens

<400> 4424

Ser	Gly	Ser	Gly	Phe	Cys	Asp	Asn	Met	Leu	Ala	Asp	Leu	Gly	Leu	Ile
1				5					10					15	
Gly	Thr	Ile	Gly	Glu	Asp	Asp	Glu	Val	Pro	Val	Glu	Pro	Glu	Ser	Asp
			20					25					30		
Ser	Gly	Asp	Glu	Glu	Glu	Glu	Gly	Pro	Ile	Val	Leu	Gly	Arg	Arg	Gln
			35				40					45			
Lys	Ala	Leu	Gly	Lys	Asn	Arg	Ser	Ala	Asp	Phe	Asn	Pro	Asp	Phe	Val
			50			55					60				
Phe	Thr	Glu	Lys	Glu	Gly	Thr	Tyr	Asp	Gly	Ser	Trp	Ala	Leu	Ala	Asp
			65			70				75				80	
Val	Met	Ser	Gln	Leu	Lys	Lys	Lys	Arg	Ala	Ala	Thr	Thr	Leu	Asp	Glu
			85						90					95	
Lys	Ile	Glu	Lys	Val	Arg	Lys	Lys	Arg	Lys	Thr	Glu	Asp	Lys	Glu	Ala
			100					105					110		
Lys	Ser	Gly	Lys	Leu	Glu	Lys	Glu	Lys	Glu	Ala	Lys	Glu	Gly	Ser	Glu

115	120	125
Pro Arg Glu Gln Glu Asp	Leu Gln Glu Asn Asp	Glu Glu Gly Ser Glu
130	135	140
Asp Glu Ala Ser Glu Thr	Asp Tyr Ser Ser Ala Asp	Glu Asn Ile Leu
145	150	155
Thr Lys Ala Asp Thr	Leu Lys Val Lys Asp Arg	Lys Lys Lys Lys Lys
165	170	175
Lys Gly Gln Glu Ala Gly	Gly Phe Phe Glu Asp	Ala Ser Gln Tyr Asp
180	185	190
Glu Asn Leu Ser Phe Gln	Asp Met Asn Leu Ser Arg	Pro Leu Leu Lys
195	200	205
Ala Ile Thr Ala Met Gly	Phe Lys Gln Pro Thr	Pro Ile Gln Lys Ala
210	215	220
Cys Ile Pro Val Gly Leu	Leu Gly Lys Asp Ile	Cys Ala Cys Ala Ala
225	230	235
Thr Gly Thr Gly Lys Thr	Ala Ala Phe Ala Leu	Pro Val Leu Glu Arg
245	250	255
Leu Ile Tyr Lys Pro Arg	Gln Ala Pro Val Thr	Arg Val Leu Val Leu
260	265	270
Val Pro Thr Arg Glu Leu	Gly Ile Gln Val His	Ser Val Thr Arg Gln
275	280	285
Leu Ala Gln Phe Cys Asn	Ile Thr Thr Cys Leu	Ala Val Gly Gly Leu
290	295	300
Asp Val Lys Ser Gln Glu	Ala Ala Leu Arg Ala	Ala Pro Asp Ile Leu
305	310	315
Ile Ala Thr Pro Gly Arg	Leu Ile Asp His Leu	His Asn Cys Pro Ser
325	330	335
Phe His Leu Ser Ser Ile	Glu Val Leu Ile Leu	Asp Glu Ala Asp Arg
340	345	350
Met Leu Asp Glu Tyr Phe	Glu Glu Gln Met Lys	Glu Ile Ile Arg Met
355	360	365
Cys Ser His His Arg Gln	Thr Met Leu Phe Ser	Ala Thr Met Thr Asp
370	375	380
Glu Val Lys Asp Leu Ala	Ser Val Ser Leu Lys	Asn Pro Val Arg Ile
385	390	395
Phe Val Asn Ser Asn Thr	Asp Val Ala Pro Phe	Leu Arg Gln Glu Phe
405	410	415
Ile Arg Ile Arg Pro Asn	Arg Glu Gly Asp Arg	Glu Ala Ile Val Ala
420	425	430
Ala Leu Leu Thr Arg Thr	Phe Thr Asp His Val	Met Leu Phe Thr Gln
435	440	445
Thr Lys Lys Gln Ala His	Arg Met His Ile Leu	Leu Gly Leu Met Gly
450	455	460
Leu Gln Val Gly Glu Leu	His Gly Asn Leu Ser	Gln Thr Gln Arg Leu
465	470	475
Glu Ala Leu Arg Arg Phe	Lys Asp Glu Gln Ile	Asp Ile Leu Val Ala
485	490	495
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 4440  
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 4474

&lt;210&gt; 4428

&lt;211&gt; 763

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4428

Met	Val	Ala	Cys	Arg	Ala	Ile	Gly	Ile	Leu	Ser	Arg	Phe	Ser	Ala	Phe
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			20					25					30		
Ser	Ala	Leu	Leu	Thr	Arg	Thr	His	Ile	Asn	Tyr	Gly	Val	Lys	Gly	Asp
		35					40					45			
Val	Ala	Val	Val	Arg	Ile	Asn	Ser	Pro	Asn	Ser	Lys	Val	Asn	Thr	Leu
	50					55					60				
Ser	Lys	Glu	Leu	His	Ser	Glu	Phe	Ser	Glu	Val	Met	Asn	Glu	Ile	Trp
65				70					75				80		
Ala	Ser	Asp	Gln	Ile	Arg	Ser	Ala	Val	Leu	Ile	Ser	Ser	Lys	Pro	Gly
			85					90					95		
Cys	Phe	Ile	Ala	Gly	Ala	Asp	Ile	Asn	Met	Leu	Ala	Ala	Cys	Lys	Thr
		100						105					110		
Leu	Gln	Glu	Val	Thr	Gln	Leu	Ser	Gln	Glu	Ala	Gln	Arg	Ile	Val	Glu
	115						120					125			
Lys	Leu	Glu	Lys	Ser	Thr	Lys	Pro	Ile	Val	Ala	Ala	Ile	Asn	Gly	Ser
	130					135					140				
Cys	Leu	Gly	Gly	Gly	Leu	Glu	Val	Ala	Ile	Ser	Cys	Gln	Tyr	Arg	Ile
145					150				155					160	
Ala	Thr	Lys	Asp	Arg	Lys	Thr	Val	Leu	Gly	Thr	Pro	Glu	Val	Leu	Leu

165 170 175  
 Gly Ala Leu Pro Gly Ala Gly Gly Thr Gln Arg Leu Pro Lys Met Val  
 180 185 190  
 Gly Val Pro Ala Ala Leu Asp Met Met Leu Thr Gly Arg Ser Ile Arg  
 195 200 205  
 Ala Asp Arg Ala Lys Lys Met Gly Leu Val Asp Gln Leu Val Glu Pro  
 210 215 220  
 Leu Gly Pro Gly Leu Lys Pro Pro Glu Glu Arg Thr Ile Glu Tyr Leu  
 225 230 235 240  
 Glu Glu Val Ala Ile Thr Phe Ala Lys Gly Leu Ala Asp Lys Lys Ile  
 245 250 255  
 Ser Pro Lys Arg Asp Lys Gly Leu Val Glu Lys Leu Thr Ala Tyr Ala  
 260 265 270  
 Met Thr Ile Pro Phe Val Arg Gln Gln Val Tyr Lys Lys Val Glu Glu  
 275 280 285  
 Lys Val Arg Lys Gln Thr Lys Gly Leu Tyr Pro Ala Pro Leu Lys Ile  
 290 295 300  
 Ile Asp Val Val Lys Thr Gly Ile Glu Gln Gly Ser Asp Ala Gly Tyr  
 305 310 315 320  
 Leu Cys Glu Ser Gln Lys Phe Gly Glu Leu Val Met Thr Lys Glu Ser  
 325 330 335  
 Lys Ala Leu Met Gly Leu Tyr His Gly Gln Val Leu Cys Lys Lys Asn  
 340 345 350  
 Lys Phe Gly Ala Pro Gln Lys Asp Val Lys His Leu Ala Ile Leu Gly  
 355 360 365  
 Ala Gly Leu Met Gly Ala Gly Ile Ala Gln Val Ser Val Asp Lys Gly  
 370 375 380  
 Leu Lys Thr Ile Leu Lys Asp Ala Thr Leu Thr Ala Leu Asp Arg Gly  
 385 390 395 400  
 Gln Gln Gln Val Phe Lys Gly Leu Asn Asp Lys Val Lys Lys Lys Ala  
 405 410 415  
 Leu Thr Ser Phe Glu Arg Asp Ser Ile Phe Ser Asn Leu Thr Gly Gln  
 420 425 430  
 Leu Asp Tyr Gln Gly Phe Glu Lys Ala Asp Met Val Ile Glu Ala Val  
 435 440 445  
 Phe Glu Asp Leu Ser Leu Lys His Arg Val Leu Lys Glu Val Glu Ala  
 450 455 460  
 Val Ile Pro Asp His Cys Ile Phe Ala Ser Asn Thr Ser Ala Leu Pro  
 465 470 475 480  
 Ile Ser Glu Ile Ala Ala Val Ser Lys Arg Pro Glu Lys Val Ile Gly  
 485 490 495  
 Met His Tyr Phe Ser Pro Val Asp Lys Met Gln Leu Leu Glu Ile Ile  
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 Thr Thr Glu Lys Thr Ser Lys Asp Thr Ser Ala Ser Ala Val Ala Val  
 515 520 525  
 Gly Leu Lys Gln Gly Lys Val Ile Ile Val Val Lys Asp Gly Pro Gly  
 530 535 540  
 Phe Tyr Thr Thr Arg Cys Leu Ala Pro Met Met Ser Glu Val Ile Arg  
 545 550 555 560  
 Ile Leu Gln Glu Gly Val Asp Pro Lys Lys Leu Asp Ser Leu Thr Thr  
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 Ser Phe Gly Phe Pro Val Gly Ala Ala Thr Leu Val Asp Glu Val Gly  
 580 585 590  
 Val Asp Val Ala Lys His Val Ala Glu Asp Leu Gly Lys Val Phe Gly

595                      600                      605  
 Glu Arg Phe Gly Gly Gly Asn Pro Glu Leu Leu Thr Gln Met Val Ser  
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 Lys Gly Phe Leu Gly Arg Lys Ser Gly Lys Gly Phe Tyr Ile Tyr Gln  
 625                      630                      635                      640  
 Glu Gly Val Lys Arg Lys Asp Leu Asn Ser Asp Met Asp Ser Ile Leu  
 645                      650                      655  
 Ala Ser Leu Lys Leu Pro Pro Lys Ser Glu Val Ser Ser Asp Glu Asp  
 660                      665                      670  
 Ile Gln Phe Arg Leu Val Thr Arg Phe Val Asn Glu Ala Val Met Cys  
 675                      680                      685  
 Leu Gln Glu Gly Ile Leu Ala Thr Pro Ala Glu Gly Asp Ile Gly Ala  
 690                      695                      700  
 Val Phe Gly Leu Gly Phe Pro Pro Cys Leu Gly Gly Pro Phe Arg Phe  
 705                      710                      715                      720  
 Val Asp Leu Tyr Gly Ala Gln Lys Ile Val Asp Arg Leu Lys Lys Tyr  
 725                      730                      735  
 Glu Ala Ala Tyr Gly Lys Gln Phe Thr Pro Cys Gln Leu Leu Ala Asp  
 740                      745                      750  
 His Ala Asn Ser Pro Asn Lys Lys Phe Tyr Gln  
 755                      760

&lt;210&gt; 4429

&lt;211&gt; 981

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4429

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 180  
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 240  
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 840  
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 900  
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<210> 4430  
 <211> 151  
 <212> PRT  
 <213> Homo sapiens

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 Ser Ala Leu Pro Gln Val Asn Thr Arg Arg Glu Ser Leu Asn Arg Gln  
 35 40 45  
 Ala Pro Gln Pro Arg Arg Lys Pro Ser Phe Gln Thr Val Gly Ile Pro  
 50 55 60  
 Phe Ile Pro Trp His Arg Glu Pro Lys Gly Met Gln Thr Asp Pro Gly  
 65 70 75 80  
 Arg Ala Leu His Ser Gln Thr Leu Ala Arg Thr Arg Arg Leu Gly Ala  
 85 90 95  
 Pro Arg Arg Ala Leu Pro Pro Arg Pro Pro Pro Pro Ala Asp Ser Pro  
 100 105 110  
 Leu Cys Glu Leu Asn His Leu Gly Ala Met Cys Arg Gly Arg Ala Ser  
 115 120 125  
 Ala Ser Glu Val Leu Gly Gly Pro Val Thr Ala Ser Arg Phe Tyr Gly  
 130 135 140  
 Xaa Pro Pro Pro Val Ser Trp  
 145 150

<210> 4431  
 <211> 507  
 <212> DNA  
 <213> Homo sapiens

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 cagaagggtca ggctggcttg gggcctgtgc ttctgtcag accccatcag gtagggtgc  
 180  
 ccccgggacc ctggccggcc tgcagggtgg tctgtgggag gctccaggcc ctctgtgca  
 240  
 ggtccaagcg cagccaatcc tcaactcaagg ccttccttgc cctttccttc cgccacaaat  
 300  
 cccaaacaaa cgtgctgtgg tccctgcccc gtgtccacag tgccagcccc accctccag  
 360

cccgttgccc atccctgcgg ggctgcagcc atccctctcc acagcaagga tgacgtggaa  
 420  
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<210> 4432  
 <211> 57  
 <212> PRT  
 <213> Homo sapiens

<400> 4432  
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 Cys Lys Phe His Leu Gly Asp Arg Pro Ile Pro Val Thr Phe Lys Arg  
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 35 40 45  
 Leu Cys Phe Leu Ser Asp Pro Ile Arg  
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<210> 4433  
 <211> 447  
 <212> DNA  
 <213> Homo sapiens

<400> 4433  
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<210> 4434  
 <211> 149  
 <212> PRT  
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<400> 4434  
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<210> 4435
<211> 783
<212> DNA
<213> Homo sapiens
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<210> 4436

&lt;211&gt; 261

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4436

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Xaa Ala Arg Asp Glu Val Arg Asn Val Phe Arg Glu Leu Gln Ile Met
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Gln Gly Leu Glu His Pro Phe Val Val Asn Leu Trp Tyr Ser Phe Gln
 20           25           30
Asp Glu Glu Asp Met Phe Met Val Val Asp Leu Leu Leu Gly Gly Asp
 35           40           45
Leu Arg Tyr His Leu Gln Gln Asn Val His Phe Thr Glu Gly Thr Val
 50           55           60
Lys Leu Tyr Ile Cys Glu Leu Ala Leu Ala Leu Glu Tyr Leu Gln Arg
 65           70           75           80
Tyr His Ile Ile His Arg Asp Ile Lys Pro Asp Asn Ile Leu Leu Asp
 85           90           95
Glu His Gly His Val His Ile Thr Asp Phe Asn Ile Ala Thr Val Val
 100          105          110
Lys Gly Ala Glu Arg Ala Ser Ser Met Ala Gly Thr Lys Pro Tyr Met
 115          120          125
Ala Pro Glu Val Phe Gln Val Tyr Met Asp Arg Gly Pro Gly Tyr Ser
 130          135          140
Tyr Pro Val Asp Trp Trp Ser Leu Gly Ile Thr Ala Tyr Glu Leu Leu
 145          150          155          160
Arg Gly Trp Arg Pro Tyr Glu Ile His Ser Val Thr Pro Ile Asp Glu
 165          170          175
Ile Leu Asn Met Phe Lys Val Glu Arg Val His Tyr Ser Ser Thr Trp
 180          185          190
Cys Lys Gly Met Val Ala Leu Leu Arg Lys Leu Leu Thr Lys Asp Pro
 195          200          205
Glu Ser Arg Val Ser Ser Leu His Asp Ile Gln Ser Val Pro Tyr Leu
 210          215          220
Ala Asp Met Asn Trp Asp Ala Val Phe Lys Lys Ala Leu Met Pro Gly
 225          230          235          240
Phe Val Pro Asn Lys Gly Arg Leu Asn Cys Asp Pro Thr Phe Glu Leu
 245          250          255
Glu Glu Met Ile Leu
 260

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&lt;210&gt; 4437

&lt;211&gt; 620

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4437

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gagaagctgc agcaggccgt gaggcagaac gggctcatgt cggggctgat gcagatgctg
 240

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<210> 4438  
 <211> 206  
 <212> PRT  
 <213> Homo sapiens

<400> 4438  
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 Lys Arg Asp Val Val Lys Thr Ile Arg Glu Val Gln Pro Asp Val Val  
 20 25 30  
 Val Val Glu Leu Cys Gln Tyr Arg Val Ser Met Leu Lys Met Asp Glu  
 35 40 45  
 Ser Thr Leu Leu Arg Glu Ala Gln Glu Leu Ser Leu Glu Lys Leu Gln  
 50 55 60  
 Gln Ala Val Arg Gln Asn Gly Leu Met Ser Gly Leu Met Gln Met Leu  
 65 70 75 80  
 Leu Leu Lys Val Ser Ala His Ile Thr Glu Gln Leu Gly Met Ala Pro  
 85 90 95  
 Gly Gly Glu Phe Arg Glu Ala Phe Lys Glu Ala Ser Lys Val Pro Phe  
 100 105 110  
 Cys Lys Phe His Leu Gly Asp Arg Pro Ile Pro Val Thr Phe Lys Arg  
 115 120 125  
 Ala Ile Ala Ala Leu Ser Phe Trp Gln Lys Val Arg Leu Ala Trp Gly  
 130 135 140  
 Leu Cys Phe Leu Ser Asp Pro Ile Ser Lys Asp Asp Val Glu Arg Cys  
 145 150 155 160  
 Lys Gln Lys Asp Leu Leu Glu Gln Met Met Ala Glu Met Ile Gly Glu  
 165 170 175  
 Phe Pro Asp Leu His Arg Thr Ile Val Ser Glu Arg Asp Val Tyr Leu  
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<210> 4439  
 <211> 2121  
 <212> DNA  
 <213> Homo sapiens

<400> 4439



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ttaccatctt attttttcct ttgagaccaa gcatcacaga ccaaagcca caaagtttac  
240  
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420  
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 1920  
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 1980  
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<210> 4440

<211> 82

<212> PRT

<213> Homo sapiens

<400> 4440

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Leu	Arg	Phe	Ala	Phe	Ile	Asp	Val	Gly	Ile	Phe	Arg	Asn	Ser	Ala	Pro
			20					25					30		
Arg	Leu	Ser	Met	Ile	Gly	Ala	Asp	Ser	Ser	Glu	Glu	Lys	Phe	Leu	Arg
		35					40					45			
Arg	Ile	Gly	Arg	Phe	Gly	Tyr	Gly	Tyr	Gly	Pro	Tyr	Gln	Pro	Val	Pro
	50					55				60					
Glu	Gln	Pro	Leu	Tyr	Pro	Gln	Pro	Tyr	Gln	Pro	Gln	Tyr	Gln	Gln	Tyr
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Thr	Phe														

<210> 4441

<211> 2055

<212> DNA

<213> Homo sapiens

<400> 4441

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1920

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<210> 4442  
 <211> 517  
 <212> PRT  
 <213> Homo sapiens

<400> 4442  
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 35 40 45  
 Trp Arg Leu Trp Ala Ile Lys Asp Phe Gln Glu Cys Thr Trp Gln Val  
 50 55 60  
 Val Leu Asn Glu Phe Lys Arg Val Gly Glu Ser Gly Val Ser Asp Ser  
 65 70 75 80  
 Phe Phe Glu Gln Glu Pro Val Asp Thr Val Ser Ser Leu Phe His Met  
 85 90 95  
 Leu Val Asp Ser Pro Ile Asp Pro Ser Glu Lys Tyr Leu Gly Phe Pro  
 100 105 110  
 Tyr Tyr Leu Lys Ile Asn Tyr Ser Cys Glu Glu Lys Pro Ser Glu Asp  
 115 120 125  
 Leu Val Arg Met Gly His Leu Thr Gly Leu Lys Pro Leu Val Leu Val  
 130 135 140  
 Thr Phe Gln Ser Pro Val Asn Phe Tyr Arg Trp Lys Ile Glu Gln Leu  
 145 150 155 160  
 Gln Ile Gln Met Glu Ala Ala Pro Phe Arg Ser Lys Gly Gly Pro Gly  
 165 170 175  
 Gly Gly Gly Arg Asp Arg Asn Leu Ala Gly Met Asn Ile Asn Gly Phe  
 180 185 190  
 Leu Lys Arg Asp Arg Asp Asn Asn Ile Gln Phe Thr Val Gly Glu Glu  
 195 200 205  
 Leu Phe Asn Leu Met Pro Gln Tyr Phe Val Gly Val Ser Ser Arg Pro  
 210 215 220  
 Leu Trp His Thr Val Asp Gln Ser Pro Val Leu Ile Leu Gly Gly Ile  
 225 230 235 240  
 Pro Asn Glu Lys Tyr Val Leu Met Thr Asp Thr Ser Phe Lys Asp Phe  
 245 250 255  
 Ser Leu Val Glu Val Asn Gly Val Gly Gln Met Leu Ser Ile Asp Ser  
 260 265 270  
 Cys Trp Val Gly Ser Phe Tyr Cys Pro His Ser Gly Phe Thr Ala Thr  
 275 280 285  
 Ile Tyr Asp Thr Ile Ala Thr Glu Ser Thr Leu Phe Ile Arg Gln Asn  
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<211> 692
<212> DNA
<213> Homo sapiens
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120
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180
gttttgctc accctctgct aagcttcctg caaacttgac tccctgccc gtgccccag
240
ccccaaggct ggtctccagg aggtaaggcc cgccctgcag gcaacaccgg tgcttgggct
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420
caagtgaccc gactgacgct gaagctcttg ggacagaagc tggagcaaga acggcagaac
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540
ccctgcagac tgctctgaag agaaggaggg accttctgca gagactccgg gaacaacacc
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tcttgacga gctctctcgg gcccaggcct ggagcggggc aagcagagga gccctcgagt
660

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692

<210> 4444  
<211> 108  
<212> PRT  
<213> Homo sapiens

<400> 4444  
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20 25 30  
Cys Glu Ala Ser Cys Lys Leu Asp Ser Leu Pro Ser Ala Pro Ser Pro  
35 40 45  
Lys Ala Gly Leu Gln Glu Val Arg Pro Ala Leu Gln Ala Thr Pro Val  
50 55 60  
Leu Gly Leu Leu Leu Ser Ser Ser Phe Leu Arg Val Thr Glu Pro Gly  
65 70 75 80  
Arg Glu Val Gly Cys Gly Leu Pro Cys Pro Tyr Ser His Leu Leu Gln  
85 90 95  
Leu Pro Pro Cys Trp Thr His Gln Gln Gln Ser Lys  
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<210> 4445  
<211> 901  
<212> DNA  
<213> Homo sapiens

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720

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 780  
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 a  
 901

<210> 4446  
 <211> 140  
 <212> PRT  
 <213> Homo sapiens

<400> 4446  
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 Lys Met Asp Leu Pro Pro Gly Asp Pro Gly Val Leu Pro Leu Ser Cys  
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 Pro Gln Glu Cys Pro Asp Pro His Ser Tyr Pro Gly Pro Arg Ser Pro  
 35 40 45  
 Thr Pro Gly Leu Pro Ser Ser Ala Val Asn Asp Asp Leu Leu Leu Leu  
 50 55 60  
 Pro Ser Ser Leu Pro Ser Val Thr Lys Gly Leu Pro Arg Cys Gln Leu  
 65 70 75 80  
 Trp Asn Glu Gly Cys Pro Trp Glu Val Met Ile Leu Arg Tyr Thr Gly  
 85 90 95  
 Ala Gln Gln Ile Ala Ser Ser Tyr Pro Gln Thr Val Phe Ala Cys Met  
 100 105 110  
 Gln Pro Leu Ala Leu Pro Leu Cys Gly Arg Lys Pro Ala Gln Gly His  
 115 120 125  
 Thr Ala Gly Gln Gln Gln His Ser Trp Ser Gln Ile  
 130 135 140

<210> 4447  
 <211> 951  
 <212> DNA  
 <213> Homo sapiens

<400> 4447  
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 240  
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 420

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<210> 4448  
 <211> 263  
 <212> PRT  
 <213> Homo sapiens

<400> 4448  
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 35 40 45  
 Gln Ser Leu Val Ser Arg Leu Leu Ala Gln Gly Ser Glu Leu Gly Leu  
 50 55 60  
 Glu Leu Val Phe Val Trp Asn Arg Asp Pro Gly Arg Met Ala Gly Ser  
 65 70 75 80  
 Val Pro Pro Ala Leu Gln Leu Glu Asp Leu Thr Thr Leu Glu Glu Arg  
 85 90 95  
 His Pro Asp Leu Val Val Glu Val Ala His Pro Lys Ile Ile His Glu  
 100 105 110  
 Ser Gly Val Gln Ile Leu Arg His Ala Asn Leu Leu Ser Leu Arg Val  
 115 120 125  
 Thr Met Ala Thr His Pro Asp Gly Phe Arg Leu Glu Gly Pro Leu Ala  
 130 135 140  
 Ala Ala His Ser Pro Gly Pro Cys Thr Val Leu Tyr Glu Gly Pro Val  
 145 150 155 160  
 Arg Gly Leu Cys Pro Phe Ala Pro Arg Asn Ser Asn Thr Met Ala Ala  
 165 170 175  
 Ala Ala Leu Ala Ala Pro Ser Leu Gly Phe Asp Gly Val Ile Gly Val  
 180 185 190  
 Leu Val Ala Asp Thr Ser Leu Thr Asp Met His Val Val Asp Val Glu  
 195 200 205  
 Leu Ser Gly Pro Arg Gly Pro Thr Gly Arg Ser Phe Ala Val His Thr  
 210 215 220  
 Arg Arg Glu Asn Pro Ala Glu Pro Gly Ala Val Thr Gly Ser Ala Thr



225		230		235		240									
Val	Thr	Ala	Phe	Trp	Arg	Ser	Leu	Leu	Ala	Cys	Cys	Gln	Leu	Pro	Ser
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Arg	Pro	Gly	Ile	His	Leu	Cys									
			260												

&lt;210&gt; 4449

&lt;211&gt; 1365

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4449

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1140
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1200
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1260

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 1365

<210> 4450  
 <211> 194  
 <212> PRT  
 <213> Homo sapiens

<400> 4450  
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 Gly Pro Gln Asn Arg Tyr Ala Leu Ile Cys Gln Gln Cys Phe Ser His  
 35 40 45  
 Asn Gly Met Ala Leu Lys Glu Glu Phe Glu Tyr Ile Ala Phe Arg Cys  
 50 55 60  
 Ala Tyr Cys Phe Phe Leu Asn Pro Ala Arg Lys Thr Arg Pro Gln Ala  
 65 70 75 80  
 Pro Arg Leu Pro Glu Phe Ser Phe Glu Lys Arg Gln Val Val Glu Gly  
 85 90 95  
 Ser Ser Ser Val Gly Pro Leu Pro Ser Gly Ser Val Leu Ser Ser Asp  
 100 105 110  
 Asn Gln Phe Asn Glu Glu Ser Leu Glu His Asp Val Leu Asp Asp Asn  
 115 120 125  
 Thr Glu Gln Thr Asp Asp Lys Ile Pro Ala Thr Glu Gln Thr Asn Gln  
 130 135 140  
 Val Ile Glu Lys Ala Ser Asp Ser Glu Glu Pro Glu Glu Lys Gln Glu  
 145 150 155 160  
 Thr Glu Asn Glu Glu Ala Ser Val Ile Glu Thr Asn Ser Thr Val Pro  
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 Gly Ala Asp Ser Ile Pro Asp Pro Glu Leu Ser Gly Glu Ser Leu Thr  
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<210> 4451  
 <211> 1637  
 <212> DNA  
 <213> Homo sapiens

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1637

&lt;210&gt; 4452

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4452

Met Gly Ala Ala Ala Ser Gln Cys Cys Val Ala Pro Ala Leu His Trp

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Arg Ala Val Pro Thr Leu Thr Ala Thr Xaa Ser Leu Ala Asp Leu Leu
      20           25           30
Lys Tyr Asn Phe Tyr Leu Pro Phe Phe Phe Phe Gly Pro Ile Met Thr
      35           40           45
Phe Asp Arg Phe His Ala Gln Val Ser Gln Val Glu Pro Val Arg Arg
      50           55           60
Glu Gly Glu Leu Trp His Ile Arg Ala Gln Ala Gly Leu Ser Val Val
      65           70           75           80
Ala Ile Met Ala Val Asp Ile Phe Phe His Phe Phe Tyr Ile Leu Thr
      85           90           95
Ile Pro Ser Asp Leu Lys Phe Ala Asn Arg Leu Pro Asp Ser Ala Leu
      100          105          110
Ala Gly Leu Ala Tyr Ser Asn Leu Val Tyr Asp Trp Val Lys Ala Ala
      115          120          125
Val Leu Phe Gly Val Val Asn Thr Val Ala Cys Leu Asp His Leu Asp
      130          135          140
Pro Pro Gln Pro Pro Lys Cys Ile Thr Ala Leu Tyr Val Phe Ala Glu
      145          150          155          160
Thr His Phe Asp Arg Gly Ile Asn Asp Trp Leu Cys Lys Tyr Val Tyr
      165          170          175
Asn His Ile Gly Gly Glu His Ser Ala Val Ile Pro Glu Leu Ala Ala
      180          185          190
Thr Val Ala Thr Phe Ala Ile Thr Thr Leu Trp Leu Gly Pro Cys Asp
      195          200          205
Ile Val Tyr Leu Trp Ser Phe Leu Asn Cys Phe Gly Leu Asn Phe Glu
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Leu Trp Met Gln Lys Leu Ala Glu Trp Gly Pro Leu Ala Arg Ile Glu
      225          230          235          240
Ala Ser Leu Ser Val Gln Met Ser Arg Arg Val Arg Ala Leu Phe Gly
      245          250          255
Ala Met Asn Phe Trp Ala Ile Ile Met Tyr Asn Leu Val Ser Leu Asn
      260          265          270
Ser Leu Lys Phe Thr Glu Leu Val Ala Arg Arg Leu Leu Leu Thr Gly
      275          280          285
Phe Pro Gln Thr Thr Leu Ser Ile Leu Phe Val Thr Tyr Cys Gly Val
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Gln Leu Val Lys Glu Arg Glu Arg Thr Leu Ala Leu Glu Glu Glu Gln
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Lys Gln Asp Lys Glu Lys Pro Glu
      325

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&lt;210&gt; 4453

&lt;211&gt; 685

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4453

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<210> 4454

<211> 207

<212> PRT

<213> Homo sapiens

<400> 4454

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Gln	Lys	Trp	Ala	Ala	Gly	Ala	Lys	Ala	Tyr	Leu	Asn	Lys	Gly	Ser	Lys
		35					40					45			
Gly	Pro	Leu	Ser	Leu	Gly	Ser	Ser	Ile	Gln	Pro	Leu	Ser	Gln	Gln	Arg
	50					55					60				
Gln	Asp	Cys	Gly	Pro	Leu	Cys	Phe	Leu	Asn	Arg	Ala	Gln	Gly	Ser	Gln
65					70					75				80	
Gly	Met	Pro	Ser	Leu	Gln	His	Ser	Thr	Leu	Trp	Ser	Gln	Trp	Ser	Arg
				85					90					95	
Arg	Ser	Ser	Leu	Lys	Tyr	Tyr	Tyr	Arg	Gly	Glu	Arg	Pro	Ile	Leu	Ala
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Met	Leu	Leu	Tyr	Leu	Pro	Arg	Pro	Lys	Thr	Val	Leu	Cys	Ser	Phe	Ser
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Cys	Ser	Glu	Ile	Arg	Ser	Gln	Asn	Ser	Arg	Arg	His	Ser	Phe	Gly	Lys
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Lys	Gly	His	Ala	Phe	Val	Leu	Tyr	Leu	Ile	Leu	Val	Ser	Glu	Ala	Leu
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Ile	Pro	Val	Asp	Cys	Gly	Leu	Arg	Trp	Ser	Pro	Pro	Gln	Asp	Pro	Gln
			165					170					175		
Leu	Gln	Arg	Gln	Arg	Arg	Met	Lys	Glu	Glu	Gln	Pro	Pro	Gln	Asp	Leu
			180					185					190		
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<210> 4455

<211> 882

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4455

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 882

&lt;210&gt; 4456

&lt;211&gt; 261

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4456

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			20					25					30		
Ile	Tyr	Glu	Leu	Thr	Val	Leu	Lys	Asp	Arg	Phe	Thr	Gly	Met	His	Lys
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	50					55				60					
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65				70					75					80	
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Leu	Arg	Gln	Pro	Pro	Ser	His	Arg	Lys	Leu	Phe	Val	Gly	Met	Leu	Asn

100										105				110			
Lys	Gln	Gln	Ser	Glu	Asp	Asp	Val	Arg	Arg	Leu	Phe	Glu	Ala	Phe	Gly		
115							120				125						
Asn	Ile	Glu	Glu	Cys	Thr	Ile	Leu	Arg	Gly	Pro	Asp	Gly	Asn	Ser	Lys		
130							135				140						
Gly	Cys	Ala	Phe	Val	Lys	Tyr	Ser	Ser	His	Ala	Glu	Ala	Gln	Ala	Ala		
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Leu	Val	Val	Lys	Phe	Ala	Asp	Thr	Asp	Lys	Glu	Arg	Thr	Met	Arg	Arg		
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Met	Gln	Gln	Met	Ala	Gly	Gln	Met	Gly	Met	Phe	Asn	Pro	Met	Ala	Ile		
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Pro	Phe	Gly	Ala	Tyr	Gly	Ala	Tyr	Ala	Gln	Ala	Leu	Met	Gln	Gln	Gln		
210							215				220						
Ala	Ala	Leu	Met	Ala	Ser	Val	Ala	Gln	Gly	Gly	Tyr	Leu	Asn	Pro	Met		
225							230				235						
Ala	Ala	Phe	Ala	Ala	Ala	Gln	Met	Gln	Gln	Met	Ala	Ala	Leu	Asn	Met		
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<210> 4457
<211> 1491
<212> DNA
<213> Homo sapiens
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480
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540
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780

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&lt;210&gt; 4458

&lt;211&gt; 405

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4458

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Gln	Leu	Leu	Met	Tyr	Gln	Gln	His	Thr	Ser	His	Tyr	Asp	Leu	Glu	Arg
			20					25					30		
Lys	Gly	Gly	Tyr	Leu	Met	Leu	Ser	Phe	Ile	Asp	Phe	Cys	Pro	Phe	Ser
			35				40					45			
Val	Met	Arg	Leu	Arg	Ser	Leu	Pro	Ser	Pro	Gln	Arg	Tyr	Thr	Arg	Gln
			50				55				60				
Glu	Arg	Tyr	Arg	Ala	Arg	Pro	Pro	Arg	Val	Leu	Glu	Arg	Ser	Gly	Phe
						70			75					80	
His	Asn	Glu	Asn	Ser	Leu	Ala	Ile	Tyr	Gln	Gly	Leu	Val	Tyr	Tyr	Leu
									90					95	
Leu	Trp	Leu	His	Ser	Val	Tyr	Asp	Lys	Asp	Tyr	Tyr	Phe	Phe	Leu	Ala
									105				110		
Ser	Asn	Trp	Arg	Ser	Ala	Gly	Gly	Val	Ser	Ile	Glu	Met	Asp	Ser	Tyr
													125		
Glu	Lys	Ile	Tyr	Asn	Leu	Glu	Ser	Ala	Tyr	Glu	Leu	Pro	Glu	Arg	Ile
													140		
Phe	Leu	Asp	Lys	Gly	Thr	Glu	Tyr	Ser	Phe	Ala	Ile	Phe	Leu	Ser	Ala
Gln	Gly	His	Ser	Phe	Arg	Thr	Gln	Ser	Glu	Leu	Gly	Leu	Arg	Gly	Thr
Arg	Val	Glu	Pro	Glu	Gly	Arg	Gly	Glu	Gly	Tyr	Gln	Asn	Leu	Gly	Ala



180 185 190  
 Trp Gly Ala Gly Thr Pro Ser Glu Gly Arg Gly Leu Ser Val Asp Val  
 195 200 205  
 Gly Val Val Leu Ala Asp Pro Gly Cys Ile Glu Ala Ser Val Lys Gln  
 210 215 220  
 Glu Val Leu Ile Asn Arg Asn Ser Val Leu Phe Ser Ile Thr Leu Lys  
 225 230 235 240  
 Asp Lys Lys Leu Cys Tyr Asp Gln Gly Ile Ser Gly His His Leu Met  
 245 250 255  
 Glu Thr Ser Met Thr Val Asn Val Arg Ser Lys Pro Gly Gly Glu Gly  
 260 265 270  
 Lys Arg Leu Ala Phe Asp Ile Thr Tyr Thr Leu Glu Tyr Ser Arg Leu  
 275 280 285  
 Lys Asn Lys His Tyr Phe Asp Cys Val Asn Val Asn Pro Glu Met Pro  
 290 295 300  
 Cys Phe Leu Phe Arg Asp Ser Val Tyr Val Leu Leu Val Val Gly Gly  
 305 310 315 320  
 Gly Pro Thr Leu Asp Ser Leu Lys Asp Tyr Ser Glu Asp Glu Ile Tyr  
 325 330 335  
 Arg Phe Asn Ser Pro Leu Asp Lys Thr Asn Ser Leu Ile Trp Thr Thr  
 340 345 350  
 Arg Thr Thr Arg Thr Thr Lys Asp Ser Ala Phe His Ile Met Ser His  
 355 360 365  
 Glu Ser Pro Gly Ile Glu Trp Leu Cys Leu Glu Asn Ala Pro Cys Tyr  
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<210> 4459  
 <211> 1114  
 <212> DNA  
 <213> Homo sapiens

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<210> 4460

<211> 121

<212> PRT

<213> Homo sapiens

<400> 4460

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Ala	Pro	Pro	Ser	Arg	Ala	Ala	Arg	Arg	Ala	Arg	Ala	Leu	Ser	Pro	Ser
			20					25					30		
Gly	Lys	Glu	Arg	Ala	Ala	Pro	Ser	Gln	Gly	Ser	Pro	Arg	Cys	Cys	Pro
	35						40					45			
Leu	Ser	Pro	Gly	Ser	Ala	Arg	Gly	Ala	Arg	Gly	Glu	Asn	Gln	Pro	Arg
	50					55					60				
Ser	Arg	Gly	Arg	Ala	Ala	Asn	Gly	Arg	Ala	Pro	Pro	Gly	Pro	Leu	Thr
65					70					75				80	
Arg	Arg	Leu	Ala	Gly	Arg	Ala	Arg	Thr	Pro	Arg	Pro	Lys	Trp	Leu	Phe
			85					90					95		
Gln	Gly	Ala	Ser	Gln	Ala	Gly	Glu	Leu	Gly	Lys	Gln	Arg	Arg	Met	Pro
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<210> 4461

<211> 488

<212> DNA

<213> Homo sapiens

<400> 4461

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 240  
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 300  
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<210> 4462

<211> 96

<212> PRT

<213> Homo sapiens

<400> 4462

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			20					25					30		
Ser	Ser	Asn	Lys	Glu	Asn	Phe	Ile	Tyr	Leu	Ala	Asp	Phe	Pro	Lys	Glu
		35					40					45			
Leu	Ser	Ile	Lys	Tyr	Met	Ala	Arg	Ser	Phe	Arg	Gly	Ala	Val	Ala	Ile
	50					55				60					
Val	Thr	Glu	Thr	Glu	Glu	Val	Gly	Cys	Pro	Ala	Leu	Leu	Pro	Ile	Pro
65					70				75					80	
Ser	Leu	Pro	Thr	Pro	Lys	Pro	Gln	Gly	Pro	Leu	Phe	Pro	Pro	Ser	Gln
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<210> 4463

<211> 2662

<212> DNA

<213> Homo sapiens

<400> 4463

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<210> 4464

<211> 519

<212> PRT

<213> Homo sapiens

<400> 4464

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		20					25						30		
Val	Arg	Asp	Val	Ala	Lys	Met	Leu	Pro	Thr	Leu	Gly	Gly	Glu	Glu	Gly
		35				40					45				
Val	Ser	Arg	Ile	Tyr	Ala	Asp	Pro	Thr	Lys	Arg	Leu	Glu	Leu	Tyr	Phe
	50					55				60					
Arg	Pro	Lys	Asp	Pro	Tyr	Cys	His	Pro	Val	Cys	Ala	Asn	Arg	Phe	Ser
65				70				75						80	
Thr	Ser	Ser	Leu	Leu	Leu	Arg	Ile	Arg	Lys	Arg	Thr	Arg	Arg	Gln	Lys
			85					90						95	
Gly	Val	Leu	Gly	Thr	Glu	Ala	His	Ser	Glu	Val	Thr	Phe	Asp	Met	Glu
		100						105					110		
Ile	Leu	Gly	Ile	Ile	Ser	Thr	Ile	Tyr	Lys	Phe	Gln	Gly	Met	Ser	Asp
		115					120					125			
Phe	Gln	Tyr	Leu	Ala	Val	His	Thr	Glu	Ala	Gly	Gly	Lys	His	Thr	Ser
	130					135					140				
Met	Tyr	Asp	Lys	Val	Leu	Met	Leu	Arg	Pro	Glu	Lys	Glu	Ala	Phe	Phe
145				150						155				160	
His	Gln	Glu	Leu	Pro	Leu	Tyr	Ile	Pro	Pro	Pro	Ile	Phe	Ser	Arg	Leu
			165					170						175	
Asp	Ala	Pro	Val	Asp	Tyr	Phe	Tyr	Arg	Pro	Glu	Thr	Gln	His	Arg	Glu
		180						185				190			
Gly	Tyr	Asn	Asn	Pro	Pro	Ile	Ser	Gly	Glu	Asn	Leu	Ile	Gly	Leu	Ser

195 200 205  
 Arg Ala Arg Arg Pro His Asn Ala Ile Phe Val Asn Phe Glu Asp Glu  
 210 215 220  
 Glu Val Pro Lys Gln Pro Leu Glu Ala Ala Ala Gln Thr Trp Arg Arg  
 225 230 235 240  
 Val Cys Thr Asn Pro Val Asp Arg Lys Val Glu Glu Glu Leu Arg Lys  
 245 250 255  
 Leu Phe Asp Ile Arg Pro Ile Trp Ser Arg Asn Ala Val Lys Ala Asn  
 260 265 270  
 Ile Ser Val His Pro Asp Lys Leu Lys Val Leu Leu Pro Phe Ile Ala  
 275 280 285  
 Tyr Tyr Met Ile Thr Gly Pro Trp Arg Ser Leu Trp Ile Arg Phe Gly  
 290 295 300  
 Tyr Asp Pro Arg Lys Asn Pro Asp Ala Lys Ile Tyr Gln Val Leu Asp  
 305 310 315 320  
 Phe Arg Ile Arg Cys Gly Met Lys His Gly Tyr Ala Pro Ser Asp Leu  
 325 330 335  
 Pro Val Lys Ala Lys Arg Ser Thr Tyr Asn Tyr Ser Leu Pro Ile Thr  
 340 345 350  
 Val Lys Lys Thr Ser Ser Gln Leu Val Thr Met His Asp Leu Lys Gln  
 355 360 365  
 Gly Leu Gly Arg Ser Gly Thr Ser Gly Ala Arg Lys Pro Ala Ser Ser  
 370 375 380  
 Lys Tyr Lys Leu Lys Asp Ser Val Tyr Ile Phe Arg Glu Gly Ala Leu  
 385 390 395 400  
 Pro Pro Tyr Arg Gln Met Phe Tyr Gln Leu Cys Asp Leu Asn Val Glu  
 405 410 415  
 Glu Leu Gln Lys Ile Ile His Arg Asn Asp Gly Ala Glu Asn Ser Cys  
 420 425 430  
 Thr Glu Arg Asp Gly Trp Cys Leu Pro Lys Thr Ser Asp Glu Leu Arg  
 435 440 445  
 Asp Thr Met Ser Leu Met Ile Arg Gln Thr Ile Arg Ser Lys Arg Pro  
 450 455 460  
 Ala Leu Phe Ser Ser Ser Ala Lys Ala Asp Gly Gly Lys Glu Gln Leu  
 465 470 475 480  
 Thr Tyr Glu Ser Gly Glu Asp Glu Glu Asp Glu Glu Glu Glu Glu  
 485 490 495  
 Glu Glu Glu Asp Phe Lys Pro Ser Asp Gly Ser Glu Asn Glu Met Glu  
 500 505 510  
 Thr Glu Ile Leu Asp Tyr Val  
 515

&lt;210&gt; 4465

&lt;211&gt; 1291

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4465

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 gtgggcgaac ggtaccgcga cctgatcgag gcgnccgaca ccatcggcca gatgcgccgt  
 120

 ngcgccgtgg ggctagtga cgccgtgaag gccaccgacc agtactgcgc ccgcctccgc  
 180

caggccggct cggccgcgcc ccggccaccg cgggcccagc agccacagca gccatcccaa  
 240  
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 360  
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 480  
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 1200  
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 1260  
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 1291

&lt;210&gt; 4466

&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4466

Gly	Leu	Glu	Arg	Gln	Val	Arg	Ala	Glu	Ile	Glu	His	Lys	Lys	Glu	Glu
1				5				10						15	
Leu	Arg	Gln	Met	Val	Gly	Glu	Arg	Tyr	Arg	Asp	Leu	Ile	Glu	Ala	Xaa
			20					25					30		
Asp	Thr	Ile	Gly	Gln	Met	Arg	Arg	Xaa	Ala	Val	Gly	Leu	Val	Asp	Ala
		35					40					45			
Val	Lys	Ala	Thr	Asp	Gln	Tyr	Cys	Ala	Arg	Leu	Arg	Gln	Ala	Gly	Ser
	50					55				60					
Ala	Ala	Pro	Arg	Pro	Pro	Arg	Ala	Gln	Gln	Pro	Gln	Gln	Pro	Ser	Gln

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Glu	Lys	Phe	Tyr	Ser	Met	Ala	Ala	Arg	Ser	Ser	Tyr	Ser
				85				90				

<210> 4467  
 <211> 1142  
 <212> DNA  
 <213> Homo sapiens

<400> 4467  
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 120  
 tatgacagca tcaaaggtca cgtgcggttc attgactatg aatatgctgg ctacaactac  
 180  
 caagcttttg acattggcaa ccatttcaat gagtttgag gcgatgaatga ggtggattac  
 240  
 tgctgtgacc cggcgcgga gaccagctg cagtggctgc actactacct gcaggcaca  
 300  
 aaggggatgg ccgtgacccc caggaggtg caaaggctct acgtgcaagt caacaagttt  
 360  
 gccctggcgt ctacttctt ctgggtcttc tgggccctca tccagaacca gtactccacc  
 420  
 atcgactttg atttcctcag gtacgcagt atccgattca accagtactt caaggtgaag  
 480  
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 540  
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 660  
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 960  
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 1020  
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 1140  
 gt  
 1142

<210> 4468  
 <211> 170  
 <212> PRT



&lt;213&gt; Homo sapiens

&lt;400&gt; 4468

Xaa Asp Val Pro Lys Val Glu Val Leu Glu Arg Glu Leu Ala Trp Leu  
 1 5 10 15  
 Lys Glu His Leu Ser Gln Leu Glu Ser Pro Val Val Phe Cys His Asn  
 20 25 30  
 Asp Leu Leu Cys Lys Asn Ile Ile Tyr Asp Ser Ile Lys Gly His Val  
 35 40 45  
 Arg Phe Ile Asp Tyr Glu Tyr Ala Gly Tyr Asn Tyr Gln Ala Phe Asp  
 50 55 60  
 Ile Gly Asn His Phe Asn Glu Phe Ala Gly Val Asn Glu Val Asp Tyr  
 65 70 75 80  
 Cys Leu Tyr Pro Ala Arg Glu Thr Gln Leu Gln Trp Leu His Tyr Tyr  
 85 90 95  
 Leu Gln Ala Gln Lys Gly Met Ala Val Thr Pro Arg Glu Val Gln Arg  
 100 105 110  
 Leu Tyr Val Gln Val Asn Lys Phe Ala Leu Ala Ser His Phe Phe Trp  
 115 120 125  
 Ala Leu Trp Ala Leu Ile Gln Asn Gln Tyr Ser Thr Ile Asp Phe Asp  
 130 135 140  
 Phe Leu Arg Tyr Ala Val Ile Arg Phe Asn Gln Tyr Phe Lys Val Lys  
 145 150 155 160  
 Pro Gln Ala Ser Ala Leu Glu Met Pro Lys  
 165 170

&lt;210&gt; 4469

&lt;211&gt; 409

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4469

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 ctgaacgttg cattctgtcc tgatgacact cactttgttt ccagatccca gtgttggtca  
 120  
 ggcctgggat ggccaagaca gttggaaagc aggagatgga caacttgaag gcattgcaca  
 180  
 gtgctttaga ggctctctgc gagccttggg tttgaagctt taacaggcct ccctcccatc  
 240  
 tggaaatagg tagctgtgtc tgagactcct ggagaacaat taatatgagg gccaggcaga  
 300  
 tcacaatttc aggaaaatgg ctaccctgtg aggagagaaa gccacccaat gatgctgata  
 360  
 cctggccatt tcctgtaccg aggcattgng ttgggggggtc tgaagttag  
 409

&lt;210&gt; 4470

&lt;211&gt; 55

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4470

Ile Tyr Asp Ala Gln His Ala Asn Leu Ala Gly Thr Leu Ser Gly His

1	5	10	15
Ala Ser Trp Val Leu Asn Val Ala Phe Cys Pro Asp Asp Thr His Phe			
	20	25	30
Val Ser Arg Ser Gln Cys Trp Ser Gly Leu Gly Trp Pro Arg Gln Leu			
	35	40	45
Glu Ser Arg Arg Trp Thr Thr			
50	55		

&lt;210&gt; 4471

&lt;211&gt; 1771

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4471

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 60  
 agtttctct tctggaaatt ggggaatctt catgtcacct tcttgacagc atttgccagg  
 120  
 catccagcag gcgcttaata aatggccaag tcattgtttg ggtttctaaa taaggctctc  
 180  
 ctaatggccg ggtctggcca cggctccagt gtccctgggc agccctccga ggggcccggca  
 240  
 cagggcgcac tataaatgag cggctgcgca cgcaggggca ctgcaacgcg gaggagcagg  
 300  
 atggagatcc ctgtgcctgt gcagccgtct tggctgcgcc gcgcctcggc cccgttgccc  
 360  
 ggactttcgg cggccggacg cctctttgac cagcgcttcg gcgaggggct gctggaggcc  
 420  
 gagctggctg cgctctgccc caccacgctc gcccctact acctgcgcgc acccagcgtg  
 480  
 gcgctgcccc tcgcccagggt gccgacggac cccggccact ttcggtgct gctagacgtg  
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 720  
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 840  
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 1080  
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 1200

acagccctcc cccaacccca ggccagtcag gcacaatccc cccacccccc aaacgtcctg  
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 cctgcaacca gacagtctac aactgcccc tccagcccat tttctgccgt gaaaccccag  
 1380  
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 1560  
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 1620  
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 1680  
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 1740  
 aaaagaaaaa aaagtcgacg cggccggaat t  
 1771

&lt;210&gt; 4472

&lt;211&gt; 160

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4472

Met	Glu	Ile	Pro	Val	Pro	Val	Gln	Pro	Ser	Trp	Leu	Arg	Arg	Ala	Ser
1				5					10					15	
Ala	Pro	Leu	Pro	Gly	Leu	Ser	Ala	Pro	Gly	Arg	Leu	Phe	Asp	Gln	Arg
			20					25					30		
Phe	Gly	Glu	Gly	Leu	Leu	Glu	Ala	Glu	Leu	Ala	Ala	Leu	Cys	Pro	Thr
		35					40					45			
Thr	Leu	Ala	Pro	Tyr	Tyr	Leu	Arg	Ala	Pro	Ser	Val	Ala	Leu	Pro	Val
	50					55					60				
Ala	Gln	Val	Pro	Thr	Asp	Pro	Gly	His	Phe	Ser	Val	Leu	Leu	Asp	Val
65				70					75				80		
Lys	His	Phe	Ser	Pro	Glu	Glu	Ile	Ala	Val	Lys	Val	Val	Gly	Glu	His
			85					90					95		
Val	Glu	Val	His	Ala	Arg	His	Glu	Glu	Arg	Pro	Asp	Glu	His	Gly	Phe
			100					105					110		
Val	Ala	Arg	Glu	Phe	His	Arg	Arg	Tyr	Arg	Leu	Pro	Pro	Gly	Val	Asp
		115				120						125			
Pro	Ala	Ala	Val	Thr	Ser	Ala	Leu	Ser	Pro	Glu	Gly	Val	Leu	Ser	Ile
	130					135					140				
Gln	Ala	Ala	Pro	Ala	Ser	Ala	Gln	Ala	Pro	Pro	Pro	Ala	Ala	Ala	Lys
145				150					155						160

&lt;210&gt; 4473

&lt;211&gt; 1255

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4473

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 120  
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 180  
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 240  
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 300  
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 360  
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 420  
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 720  
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 1200  
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 1255

&lt;210&gt; 4474

&lt;211&gt; 305

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4474

Met	Thr	Asn	Gln	Tyr	Gly	Ile	Leu	Phe	Lys	Gln	Glu	Gln	Ala	His	Asp
1					5				10					15	
Asp	Ala	Ile	Trp	Ser	Val	Ala	Trp	Gly	Thr	Asn	Lys	Lys	Glu	Asn	Ser
			20					25					30		
Glu	Thr	Val	Val	Thr	Gly	Ser	Leu	Asp	Asp	Leu	Val	Lys	Val	Trp	Lys

35 40 45  
 Trp Arg Asp Glu Arg Leu Asp Leu Gln Trp Ser Leu Glu Gly His Gln  
 50 55 60  
 Leu Gly Val Val Ser Val Asp Ile Ser His Thr Leu Pro Ile Ala Ala  
 65 70 75 80  
 Ser Ser Ser Leu Asp Ala His Ile Arg Leu Trp Asp Leu Glu Asn Gly  
 85 90 95  
 Lys Gln Met Lys Ser Ile Asp Ala Gly Pro Val Asp Ala Trp Thr Leu  
 100 105 110  
 Ala Phe Ser Pro Asp Ser Gln His Leu Ala Thr Gly Thr His Met Gly  
 115 120 125  
 Lys Val Asn Ile Phe Gly Val Glu Ser Gly Lys Lys Glu Tyr Ser Leu  
 130 135 140  
 Asp Thr Arg Gly Lys Phe Ile Leu Ser Ile Ala Tyr Ser Pro Asp Gly  
 145 150 155 160  
 Lys Tyr Leu Ala Ser Gly Ala Ile Asp Gly Ile Ile Asn Ile Phe Asp  
 165 170 175  
 Ile Ala Thr Gly Lys Leu Leu His Thr Leu Glu Gly His Ala Met Pro  
 180 185 190  
 Ile Arg Ser Leu Thr Phe Ser Pro Asp Ser Gln Leu Leu Val Thr Ala  
 195 200 205  
 Ser Asp Asp Gly Tyr Ile Lys Ile Tyr Asp Val Gln His Ala Asn Leu  
 210 215 220  
 Ala Gly Thr Leu Ser Gly His Ala Ser Trp Val Leu Asn Val Ala Phe  
 225 230 235 240  
 Cys Pro Asp Asp Thr His Phe Val Ser Ser Ser Ser Asp Lys Ser Val  
 245 250 255  
 Lys Val Trp Asp Val Gly Thr Arg Thr Cys Val His Thr Phe Phe Asp  
 260 265 270  
 His Gln Asp Gln Val Trp Gly Val Lys Tyr Asn Gly Asn Gly Ser Lys  
 275 280 285  
 Ile Val Ser Val Gly Asp Asp Gln Glu Ile His Ile Tyr Asp Cys Pro  
 290 295 300  
 Ile  
 305

&lt;210&gt; 4475

&lt;211&gt; 475

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4475

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 120  
 tggctctgtcg tgaagctgga gagccgtgca aggcgacaga gccttctgtg tggcccgtcc  
 180  
 tggcgtctg gggcaagggc tgacttgagc tgcttcgtct gctcatctgc tgtctgccag  
 240  
 ctgccctcag acctcctcct ggggtgcagc cgttcccact tgagaggag gtggcttca  
 300  
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 360

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 475

<210> 4476  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 4476  
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 1 Gly Leu His Pro Gly Gly Gly Leu Arg Ala Ala Gly Arg Gln Gln Met  
                   20                  25                  30  
 Ser Arg Arg Ser Ser Ser Ser Gln Pro Leu Pro Gln Ser Ala Arg Thr  
                   35                  40                  45  
 Gly His Thr Glu Gly Ser Val Ala Leu His Gly Ser Pro Ala Ser Arg  
                   50                  55                  60  
 Gln Thr Ser Gln Arg Trp Thr Val Cys Gln Gly Trp Asp Trp Asn Ser  
                   65                  70                  75                  80  
 Arg Arg Ser Leu Asp Thr Ser Gly Ile Arg Glu Thr Ser Leu Gly Arg  
                   85                  90                  95  
 Tyr Pro Leu Pro Ser Ser Arg Val His Ala  
                   100                  105

<210> 4477  
 <211> 1153  
 <212> DNA  
 <213> Homo sapiens

<400> 4477  
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 120  
 taggccaggg cagatgggat atgacgaatg gactgccagc tggatacaag gatgctcacc  
 180  
 aagcaccaag ttctcacaag ttattttatg tgactttgca ggaactgagg cattatatct  
 240  
 gaggacacca ggggaaaagt gtggcatctc agggaaatac agccctgggc tgtgtctaca  
 300  
 cacaccatga gagtgtgat gggggcgcaa tagtcttgaa aatgtataaa gtgtccagga  
 360  
 atggaagtgc tctttgatctc attattatctc tcttccttca tattccccctc ccagagtctc  
 420  
 ctatctagga catcagcatt ctacacacaag cctaattggct tatctgagta agcagggctt  
 480  
 agaaattcac tttcttgata ctacgtcttg ctttctaaac actccttgat cttgcctacc  
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 660

agtcaactta cactttttcc ttcttcattc acaaagctct tcttccttgg gccctggat  
 720  
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 840  
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 900  
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 960  
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<210> 4478

<211> 118

<212> PRT

<213> Homo sapiens

<400> 4478

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			20					25					30		
Lys	Pro	Leu	Gly	Leu	Cys	Glu	Asn	Ala	Asp	Val	Leu	Asp	Arg	Arg	Leu
		35					40					45			
Trp	Glu	Gly	Asn	Met	Lys	Glu	Glu	Asn	Asn	Asn	Glu	Ser	Lys	Ser	Thr
	50					55					60				
Ser	Ile	Pro	Gly	His	Phe	Ile	His	Phe	Gln	Asp	Tyr	Cys	Ala	Pro	Ile
65				70					75					80	
Ser	Thr	Leu	Met	Val	Cys	Val	Asp	Thr	Ala	Gln	Gly	Cys	Ile	Ser	Leu
			85					90					95		
Arg	Cys	His	Thr	Phe	Pro	Leu	Val	Ser	Ser	Asp	Ile	Met	Pro	Gln	Phe
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<210> 4479

<211> 2158

<212> DNA

<213> Homo sapiens

<400> 4479

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 1980  
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 2040  
 gccggcaaga aaccaccct gtccggaggc gggcgtgaga caagcccagc ccgcacgcgc  
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<210> 4480

<211> 308

<212> PRT

<213> Homo sapiens

<400> 4480

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			20					25					30		
Asp	Tyr	Gly	Glu	Pro	Glu	Arg	Gly	Gly	Gly	Pro	Arg	Ala	Ala	Gln	Gly
		35					40					45			
Glu	Met	Ser	Ser	Thr	Ser	Ser	Lys	Arg	Ala	Pro	Thr	Thr	Ala	Thr	Gln
	50					55					60				
Arg	Leu	Lys	Gln	Asp	Tyr	Leu	Arg	Ile	Lys	Lys	Asp	Pro	Val	Pro	Tyr
65				70					75					80	
Ile	Cys	Ala	Glu	Pro	Leu	Pro	Ser	Asn	Ile	Leu	Glu	Trp	His	Tyr	Val
			85					90						95	
Val	Arg	Gly	Pro	Glu	Met	Thr	Pro	Tyr	Glu	Gly	Gly	Tyr	Tyr	His	Gly
			100					105						110	
Lys	Leu	Ile	Phe	Pro	Arg	Glu	Phe	Pro	Phe	Lys	Pro	Pro	Ser	Ile	Tyr
		115				120						125			
Met	Ile	Thr	Pro	Asn	Gly	Arg	Phe	Lys	Cys	Asn	Thr	Arg	Leu	Cys	Leu
	130				135						140				
Ser	Ile	Thr	Asp	Phe	His	Pro	Asp	Thr	Trp	Asn	Pro	Ala	Trp	Ser	Val
145				150					155					160	
Ser	Thr	Ile	Leu	Thr	Gly	Leu	Leu	Ser	Phe	Met	Val	Glu	Lys	Gly	Pro
			165					170						175	
Thr	Leu	Gly	Ser	Ile	Glu	Thr	Ser	Asp	Phe	Thr	Lys	Arg	Gln	Leu	Ala
		180				185						190			
Val	Gln	Ser	Leu	Ala	Phe	Asn	Leu	Lys	Asp	Lys	Val	Phe	Cys	Glu	Leu
	195					200					205				
Phe	Pro	Glu	Val	Val	Glu	Glu	Ile	Lys	Gln	Lys	Gln	Lys	Ala	Gln	Asp
	210				215						220				
Glu	Leu	Ser	Ser	Arg	Pro	Gln	Thr	Leu	Pro	Leu	Pro	Asp	Val	Val	Pro
225				230					235					240	
Asp	Gly	Glu	Thr	His	Leu	Val	Gln	Asn	Gly	Ile	Gln	Leu	Leu	Asn	Gly
			245					250						255	
His	Ala	Pro	Gly	Ala	Val	Pro	Asn	Leu	Ala	Gly	Leu	Gln	Gln	Ala	Asn
		260					265					270			
Arg	His	His	Gly	Leu	Leu	Gly	Gly	Ala	Leu	Ala	Asn	Leu	Phe	Val	Ile

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 Ile Ala Gln Glu  
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<210> 4481  
 <211> 320  
 <212> DNA  
 <213> Homo sapiens

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 ggtgtgcctg acagcagggg agggcccaga gctggccttg gccatgtcca gtcctaatt  
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 320

<210> 4482  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 4482  
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 Trp Gly Leu Gly Thr Ser Cys Cys Ala Ala Arg Lys Gln Asp Ser Ala  
 20                      25                      30  
 Cys Pro Pro Thr Trp Gly Gly Asp Pro Gly Leu Gly Phe Val Gly Ala  
 35                      40                      45  
 Ser Arg Thr Pro Asp Phe Trp Gly Val Pro Asp Ser Arg Gly Gly Pro  
 50                      55                      60  
 Arg Ala Gly Leu Gly His Val Gln Ser Leu Ile Asp Leu Cys Pro Phe  
 65                      70                      75                      80  
 Leu Pro Leu Pro Leu Cys Ala Ser Leu Asp Ser Pro Arg Glu Phe Ser  
 85                      90                      95  
 Arg Met Gly Thr Gln  
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<210> 4483  
 <211> 1852  
 <212> DNA  
 <213> Homo sapiens

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ggaggatctc ggatgacaga cctaacttcc agcattccca aacctctgct tccagttggg  
180  
aacaacacct taatttggtta cccattgaac ctgcttgagc gtgttggtt tgaagaagtc  
240  
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aatgaagcag acttggtatga agagctggtc attaagggat ccacccata gaagcatcct  
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<210> 4484

<211> 452

<212> PRT

<213> Homo sapiens

<400> 4484

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		20						25					30		
Lys	Pro	Leu	Ile	Trp	Tyr	Pro	Leu	Asn	Leu	Leu	Glu	Arg	Val	Gly	Phe
		35						40				45			
Glu	Glu	Val	Ile	Val	Val	Thr	Thr	Arg	Asp	Val	Gln	Lys	Ala	Leu	Cys
	50					55				60					
Ala	Glu	Phe	Lys	Met	Lys	Met	Lys	Pro	Asp	Ile	Val	Cys	Ile	Pro	Asp
65					70					75				80	
Asp	Ala	Asp	Met	Gly	Thr	Ala	Asp	Ser	Leu	Arg	Tyr	Ile	Tyr	Pro	Lys
			85					90						95	
Leu	Lys	Thr	Asp	Val	Leu	Val	Leu	Ser	Cys	Asp	Leu	Ile	Thr	Asp	Val
			100					105					110		
Ala	Leu	His	Glu	Val	Val	Asp	Leu	Phe	Arg	Ala	Tyr	Asp	Ala	Ser	Leu
		115					120					125			
Ala	Met	Leu	Met	Arg	Lys	Gly	Gln	Asp	Ser	Ile	Glu	Pro	Val	Pro	Gly
		130				135					140				
Gln	Lys	Gly	Lys	Lys	Lys	Ala	Val	Glu	Gln	Arg	Asp	Phe	Ile	Gly	Val
145					150					155				160	
Asp	Ser	Thr	Gly	Lys	Arg	Leu	Leu	Phe	Met	Ala	Asn	Glu	Ala	Asp	Leu
			165					170						175	
Asp	Glu	Glu	Leu	Val	Ile	Lys	Gly	Ser	Ile	Leu	Gln	Lys	His	Pro	Arg
			180					185					190		
Ile	Arg	Phe	His	Thr	Gly	Leu	Val	Asp	Ala	His	Leu	Tyr	Cys	Leu	Lys
		195				200						205			
Lys	Tyr	Ile	Val	Asp	Phe	Leu	Met	Glu	Asn	Gly	Ser	Ile	Thr	Ser	Ile
		210				215					220				
Arg	Ser	Glu	Leu	Ile	Pro	Tyr	Leu	Val	Arg	Lys	Gln	Phe	Ser	Ser	Ala
225					230					235				240	
Ser	Ser	Gln	Gln	Gly	Gln	Glu	Glu	Lys	Glu	Glu	Asp	Leu	Lys	Lys	Lys
			245					250					255		
Glu	Leu	Lys	Ser	Leu	Asp	Ile	Tyr	Ser	Phe	Ile	Lys	Glu	Ala	Asn	Thr
		260						265					270		
Leu	Asn	Leu	Ala	Pro	Tyr	Asp	Ala	Cys	Trp	Asn	Ala	Cys	Arg	Gly	Asp
		275				280						285			
Arg	Trp	Glu	Asp	Leu	Ser	Arg	Ser	Gln	Val	Arg	Cys	Tyr	Val	His	Ile
		290				295					300				
Met	Lys	Glu	Gly	Leu	Cys	Ser	Arg	Val	Ser	Thr	Leu	Gly	Leu	Tyr	Met
305					310					315				320	
Glu	Ala	Asn	Arg	Gln	Val	Pro	Lys	Leu	Leu	Ser	Ala	Leu	Cys	Pro	Glu

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          325          330          335
Glu Pro Pro Val His Ser Ser Ala Gln Ile Val Ser Lys His Leu Val
          340          345          350
Gly Val Asp Ser Leu Ile Gly Pro Glu Thr Gln Ile Gly Glu Lys Ser
          355          360          365
Ser Ile Lys Arg Ser Val Ile Gly Ser Ser Cys Leu Ile Lys Asp Arg
          370          375          380
Val Thr Ile Thr Asn Cys Leu Leu Met Asn Ser Val Thr Val Glu Glu
          385          390          395          400
Gly Ser Asn Ile Gln Gly Ser Val Ile Cys Asn Asn Ala Val Ile Glu
          405          410          415
Lys Gly Ala Asp Ile Lys Asp Cys Leu Ile Gly Ser Gly Gln Arg Ile
          420          425          430
Glu Ala Lys Ala Lys Arg Val Asn Glu Val Ile Val Gly Asn Asp Gln
          435          440          445
Leu Met Glu Ile
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<210> 4485  
 <211> 513  
 <212> DNA  
 <213> Homo sapiens

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<400> 4485
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120
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gaaaaccccc aaatgtagag tatgtgacac agcaciaaagc agtcccatgc caaactgatg
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480
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513

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<210> 4486  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

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<400> 4486
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Pro Phe Val Phe Arg Pro Thr Gly Leu Ile Ala Pro Cys Ala Cys Pro
20      25      30
Ser Ile Ser Leu Pro Ser Gly Ala Pro Gly Gly Gln Gly Asp Leu Leu

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          35          40          45
Pro Gln Ala Val Pro His Leu Ile Pro Lys Val Ser Ser Asn Glu Val
          50          55          60
Asp Ser Phe Lys Tyr Trp Trp Phe Trp Leu Ala Arg Val Ser Glu Gly
65          70          75          80
Thr Glu Lys Thr Pro Lys Cys Arg Val Cys Asp Thr Ala Gln Ser Ser
          85          90          95
Pro Met Pro Asn
          100

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<210> 4487  
 <211> 387  
 <212> DNA  
 <213> Homo sapiens

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<400> 4487
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120
ggaaagtttg atattttatt caatagagtt caagcaattc agaagaaaag tggaaacttt
180
gatctgctgt tgtgtgtagg aaatttcttt ggctccaccc aagatgctga atgggaggag
240
tataagactg gcatcaagaa agctcctatt cagacatatg tgcttggtgc taataaccag
300
gaaacagtaa aatatttcca ggatgctgat ggatgtgaat tagctgaaaa cattacttat
360
ctgggtcgta aaggatatctt cactgga
387

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<210> 4488  
 <211> 129  
 <212> PRT  
 <213> Homo sapiens

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<400> 4488
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Gln Ser Gln Pro Ile Leu Phe Gly Gln Met Ala Gln Lys Pro Leu Arg
          20          25          30
Leu Leu Ala Cys Gly Asp Val Glu Gly Lys Phe Asp Ile Leu Phe Asn
          35          40          45
Arg Val Gln Ala Ile Gln Lys Lys Ser Gly Asn Phe Asp Leu Leu Leu
          50          55          60
Cys Val Gly Asn Phe Phe Gly Ser Thr Gln Asp Ala Glu Trp Glu Glu
65          70          75          80
Tyr Lys Thr Gly Ile Lys Lys Ala Pro Ile Gln Thr Tyr Val Leu Gly
          85          90          95
Ala Asn Asn Gln Glu Thr Val Lys Tyr Phe Gln Asp Ala Asp Gly Cys
          100          105          110
Glu Leu Ala Glu Asn Ile Thr Tyr Leu Gly Arg Lys Gly Ile Phe Thr
          115          120          125
Gly

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<210> 4489  
<211> 2390  
<212> DNA  
<213> Homo sapiens

<400> 4489  
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120  
gagccagggtg cctatatctt tctccagaac cccccaggtc tgcctagcat tgctgtctgc  
180  
tggttcgtgg gctgcctttg tggaagcaag ctctgctattg actggcacia ctatggctac  
240  
tccatcatgg gtctggtgca tggccccaac catccctctg ttctgctggc caagtggtag  
300  
gagaagttct ttgggcgcct gtcccacctg aacctgtgtg ttaccaatgc tatgcgagaa  
360  
gacctggcgg ataactggca catcagggtg gtgacctct acgacaagcc cgcattcttc  
420  
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600  
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660  
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720  
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960  
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1020  
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1080  
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&lt;210&gt; 4490

&lt;211&gt; 383

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4490

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			20					25					30		
Leu	Leu	Trp	Lys	Leu	Met	Trp	Arg	Glu	Pro	Gly	Ala	Tyr	Ile	Phe	Leu
		35				40					45				
Gln	Asn	Pro	Pro	Gly	Leu	Pro	Ser	Ile	Ala	Val	Cys	Trp	Phe	Val	Gly
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Cys	Leu	Cys	Gly	Ser	Lys	Leu	Val	Ile	Asp	Trp	His	Asn	Tyr	Gly	Tyr
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Ser	Ile	Met	Gly	Leu	Val	His	Gly	Pro	Asn	His	Pro	Leu	Val	Leu	Leu
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Ser Pro Phe Arg Ala Arg Ser Glu Pro Glu Asp Pro Val Thr Glu Arg
      165      170      175
Ser Ala Phe Thr Glu Arg Asp Ala Gly Ser Gly Leu Val Thr Arg Leu
      180      185      190
Arg Glu Arg Pro Ala Leu Leu Val Ser Ser Thr Ser Trp Thr Glu Asp
      195      200      205
Glu Asp Phe Ser Ile Leu Leu Ala Ala Leu Glu Lys Phe Glu Gln Leu
      210      215      220
Thr Leu Asp Gly His Asn Leu Pro Ser Leu Val Cys Val Ile Thr Gly
225      230      235      240
Lys Gly Pro Leu Arg Glu Tyr Tyr Ser Arg Leu Ile His Gln Lys His
      245      250      255
Phe Gln His Ile Gln Val Cys Thr Pro Trp Leu Glu Ala Glu Asp Tyr
      260      265      270
Pro Leu Leu Leu Gly Ser Ala Asp Leu Gly Val Cys Leu His Thr Ser
      275      280      285
Ser Ser Gly Leu Asp Leu Pro Met Lys Val Val Asp Met Phe Gly Cys
      290      295      300
Cys Leu Pro Val Cys Ala Val Asn Phe Lys Cys Leu His Glu Leu Val
305      310      315      320
Lys His Glu Glu Asn Gly Leu Val Phe Glu Asp Ser Glu Glu Leu Ala
      325      330      335
Ala Gln Leu Gln Met Leu Phe Ser Asn Phe Pro Asp Pro Ala Gly Lys
      340      345      350
Leu Asn Gln Phe Arg Lys Asn Leu Arg Glu Ser Gln Gln Leu Arg Trp
      355      360      365
Asp Glu Ser Trp Val Gln Thr Val Leu Pro Leu Val Met Asp Thr
      370      375      380

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&lt;210&gt; 4491

&lt;211&gt; 6712

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4491

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360

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&lt;210&gt; 4492

&lt;211&gt; 674

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4492

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 Gln Thr Leu Gly Arg Ile Ser Pro Val Pro Ser Pro Glu Ser Ala Tyr  
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&lt;210&gt; 4493

&lt;211&gt; 1829

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4493

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&lt;210&gt; 4494

&lt;211&gt; 111

&lt;212&gt; PRT



&lt;213&gt; Homo sapiens

&lt;400&gt; 4494

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      20           25           30
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      35           40           45
Leu Val His Leu Ala Leu Arg Phe Lys Cys Asn Gln Asn Cys Pro Gln
      50           55           60
Gly Pro Ala Ile Lys Ala Leu Ser Leu Ser Thr Phe Trp Tyr Leu Val
65           70           75           80
Arg Glu Leu Phe Thr Val Arg Lys Cys Gly Lys Ile Ala Leu Cys Val
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Cys Val Cys Val Cys Val Cys Val Cys Asn Leu Leu Gly Trp Gly
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&lt;210&gt; 4495

&lt;211&gt; 3623

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4495

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&lt;210&gt; 4496

&lt;211&gt; 560

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4496

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Tyr	Asn	Gln	Glu	Glu	Asn	Thr	Ser	Ser	Thr	Leu	Thr	His	Ala	Glu	Asn
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 Gln Ser Pro Pro Tyr Tyr Arg Cys Val Cys Lys His Pro Tyr Thr Gly  
 130 135 140  
 Pro Ser Cys Ser Gln Val Val Pro Val Cys Arg Pro Asn Pro Cys Gln  
 145 150 155 160  
 Asn Gly Ala Thr Cys Ser Arg His Lys Arg Arg Ser Lys Phe Thr Cys  
 165 170 175  
 Ala Cys Pro Asp Gln Phe Lys Gly Lys Phe Cys Glu Ile Gly Ser Asp  
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 Asp Cys Tyr Val Gly Asp Gly Tyr Ser Tyr Arg Gly Lys Met Asn Arg  
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 225 230 235 240  
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 Cys Phe Ile Lys Val Thr Asn Asp Lys Val Lys Trp Glu Tyr Cys Asp  
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 450 455 460  
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 465 470 475 480  
 Gln Leu Tyr Asp His Met Ile Asp Asp Ser Met Ile Cys Ala Gly Asn  
 485 490 495  
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 Leu Thr Cys Glu Lys Asp Gly Thr Tyr Tyr Val Tyr Gly Ile Val Ser

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 <211> 840  
 <212> DNA  
 <213> Homo sapiens

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<210> 4498  
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 <212> PRT  
 <213> Homo sapiens

<400> 4498  
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<210> 4499
<211> 562
<212> DNA
<213> Homo sapiens
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180
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<212> PRT  
<213> Homo sapiens

<400> 4500  
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His Gly Leu Ser Pro Leu Asn Val Ile Ala Glu Asp Gly Thr Met Thr  
35 40 45  
Ser Leu Cys Gly Asp Trp Leu Gln Gly Leu His Arg Phe Val Ala Arg  
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<210> 4501  
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<212> DNA  
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&lt;210&gt; 4502

&lt;211&gt; 267

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4502

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Ala	Ala	Pro	Gly	Gln	Arg	Leu	Pro	Glu	Ser	Leu	Arg	Ala	Thr	Tyr	Arg
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Arg	Pro	Phe	His	Thr	His	Ser	Cys	Ala	Arg	Cys	Pro	Ala	Asn	Met	Cys					
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Lys	His	Lys	Val	Leu	Ser	Asp	Tyr	Leu	Arg	Glu	Arg	Ala	His	Asp	Gly					
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Val	His	Phe	Glu	Arg	Leu	Phe	Tyr	Val	Gly	Asp	Gly	Ala	Asn	Asp	Phe					
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Cys	Pro	Met	Gly	Leu	Leu	Ala	Gly	Gly	Asp	Val	Ala	Phe	Pro	Arg	Arg					
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Gly	Tyr	Pro	Met	His	Arg	Leu	Ile	Gln	Glu	Ala	Gln	Lys	Ala	Glu	Pro					
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Ser	Ser	Phe	Arg	Ala	Ser	Val	Val	Pro	Trp	Glu	Thr	Ala	Ala	Asp	Val					
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<211> 1983
<212> DNA
<213> Homo sapiens
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&lt;210&gt; 4504

&lt;211&gt; 250

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

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 Tyr Val Ile Ile Pro Arg Ile Glu Arg Thr Leu Ala Tyr Ile Ile Thr  
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 Glu Leu Asp Glu Arg Glu Arg Glu Glu Phe Tyr Arg Leu Lys Lys Ile  
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&lt;210&gt; 4505

&lt;211&gt; 379

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4505

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&lt;210&gt; 4506

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4506

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Pro Thr Pro Ser Ala Gln Gly Gln Ala Ala Leu Arg Gln Thr Cys Pro
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His Leu Arg Glu Ser Gly Pro Leu Ser Val Arg His Val Ala Leu Leu
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Ala Leu Glu Thr Ala Ser His Pro Ser Gly Pro His Thr Asn Gln Ala
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&lt;210&gt; 4507

&lt;211&gt; 3664

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4507

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<211> 172

<212> PRT

<213> Homo sapiens

<400> 4508

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&lt;211&gt; 11680

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4509

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&lt;210&gt; 4510

&lt;211&gt; 3266

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4510

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His	Asp	Leu	Arg	Asn	Ile	Phe	Gln	Arg	Phe	Gly	Glu	Ile	Val	Asp	Ile
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Tyr	Leu	Thr	Arg	His	Phe	Cys	Arg	Tyr	Gly	Pro	Val	Val	Lys	Val	Val
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Lys	Ala	Lys	Leu	Asp	Asn	Asp	Thr	Val	Lys	Ser	Ser	Ala	Leu	Asp	Gln

**3700**



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1795	1800	1805
Glu Thr Glu Leu Ala Ala Ala Ile Gly Ser Ile Ile Asn Asp Ile Ser		
1810	1815	1820
Gly Glu Pro Glu Asn Phe Pro Ala Pro Pro Tyr Pro Gly Glu Ser		
1825	1830	1835
Gln Thr Asp Leu Gln Pro Pro Ala Gly Ala Gln Ala Leu Gln Pro Ser		
1845	1850	1855
Glu Glu Gly Met Glu Thr Asp Glu Ala Val Ser Gly Ile Leu Glu Thr		
1860	1865	1870
Glu Ala Ala Thr Glu Ser Ser Arg Pro Pro Val Asn Ala Pro Asp Pro		
1875	1880	1885
Ser Ala Gly Pro Thr Asp Thr Lys Glu Ala Arg Gly Asn Ser Ser Glu		
1890	1895	1900
Thr Ser His Ser Val Pro Glu Ala Lys Gly Ser Lys Glu Val Glu Val		
1905	1910	1915
Thr Leu Val Arg Lys Asp Lys Gly Arg Gln Lys Thr Thr Arg Ser Arg		
1925	1930	1935
Arg Lys Arg Asn Thr Asn Lys Lys Val Val Ala Pro Val Glu Ser His		
1940	1945	1950
Val Pro Glu Ser Asn Gln Ala Gln Gly Glu Ser Pro Ala Ala Asn Glu		
1955	1960	1965
Gly Thr Thr Val Gln His Pro Glu Ala Pro Gln Glu Glu Lys Gln Ser		
1970	1975	1980
Glu Lys Pro His Ser Thr Pro Pro Gln Ser Cys Thr Ser Asp Leu Ser		
1985	1990	1995
Lys Ile Pro Ser Thr Glu Asn Ser Ser Gln Glu Ile Ser Val Glu Glu		
2005	2010	2015
Arg Thr Pro Thr Lys Ala Ser Val Pro Pro Asp Leu Pro Pro Pro Pro		
2020	2025	2030
Gln Pro Ala Pro Val Asp Glu Glu Pro Gln Ala Arg Phe Arg Val His		
2035	2040	2045
Ser Ile Ile Glu Ser Asp Pro Val Thr Pro Pro Ser Asp Pro Ser Ile		
2050	2055	2060
Pro Ile Pro Thr Leu Pro Ser Val Thr Ala Ala Lys Leu Ser Pro Pro		
2065	2070	2075
Val Ala Ser Gly Gly Ile Pro His Gln Ser Pro Pro Thr Lys Val Thr		
2085	2090	2095
Glu Trp Ile Thr Arg Gln Glu Glu Pro Arg Ala Gln Ser Thr Pro Ser		
2100	2105	2110
Pro Ala Leu Pro Pro Asp Thr Lys Ala Ser Asp Val Asp Thr Ser Ser		
2115	2120	2125
Ser Thr Leu Arg Lys Ile Leu Met Asp Pro Lys Tyr Val Ser Ala Thr		
2130	2135	2140
Ser Val Thr Ser Thr Ser Val Thr Thr Ala Ile Ala Glu Pro Val Ser		
2145	2150	2155
Ala Ala Pro Cys Leu His Glu Ala Pro Pro Pro Val Asp Ser Lys		
2165	2170	2175
Lys Pro Leu Glu Glu Lys Thr Ala Pro Pro Val Thr Asn Asn Ser Glu		
2180	2185	2190
Ile Gln Ala Ser Glu Val Leu Val Ala Ala Asp Lys Glu Lys Val Ala		
2195	2200	2205
Pro Val Ile Ala Pro Lys Ile Thr Ser Val Ile Ser Arg Met Pro Val		
2210	2215	2220
Ser Ile Asp Leu Glu Asn Ser Gln Lys Ile Thr Leu Ala Lys Pro Ala		

2225                      2230                      2235                      2240  
 Pro Gln Thr Leu Thr Gly Leu Val Ser Ala Leu Thr Gly Leu Val Asn  
                                  2245                      2250                      2255  
 Val Ser Leu Val Pro Val Asn Ala Leu Lys Gly Pro Val Lys Gly Ser  
                                  2260                      2265                      2270  
 Val Thr Thr Leu Lys Ser Leu Val Ser Thr Pro Ala Gly Pro Val Asn  
                                  2275                      2280                      2285  
 Val Leu Lys Gly Pro Val Asn Val Leu Thr Gly Pro Val Asn Val Leu  
                                  2290                      2295                      2300  
 Thr Thr Pro Val Asn Ala Thr Val Gly Thr Val Asn Ala Ala Pro Gly  
 2305                      2310                      2315                      2320  
 Thr Val Asn Ala Ala Ala Ser Ala Val Asn Ala Thr Ala Ser Ala Val  
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 Thr Val Thr Ala Gly Ala Val Thr Ala Ala Ser Gly Gly Val Thr Ala  
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 Thr Thr Gly Thr Val Thr Met Ala Gly Ala Val Ile Ala Pro Ser Thr  
                                  2355                      2360                      2365  
 Lys Cys Lys Gln Arg Ala Ser Ala Asn Glu Asn Ser Arg Phe His Pro  
                                  2370                      2375                      2380  
 Gly Ser Met Pro Val Ile Asp Asp Arg Pro Ala Asp Ala Gly Ser Gly  
 2385                      2390                      2395                      2400  
 Ala Gly Leu Arg Val Asn Thr Ser Glu Gly Val Val Leu Leu Ser Tyr  
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 Ser Gly Gln Lys Thr Glu Gly Pro Gln Arg Ile Ser Ala Lys Ile Ser  
                                  2420                      2425                      2430  
 Gln Ile Pro Pro Ala Ser Ala Met Asp Ile Glu Phe Gln Gln Ser Val  
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 Ser Lys Ser Gln Val Lys Pro Asp Ser Val Thr Ala Ser Gln Pro Pro  
                                  2450                      2455                      2460  
 Ser Lys Gly Pro Gln Ala Pro Ala Gly Tyr Ala Asn Val Ala Thr His  
 2465                      2470                      2475                      2480  
 Ser Thr Leu Val Leu Thr Ala Gln Thr Tyr Asn Ala Ser Pro Val Ile  
                                  2485                      2490                      2495  
 Ser Ser Val Lys Ala Asp Arg Pro Ser Leu Glu Lys Pro Glu Pro Ile  
                                  2500                      2505                      2510  
 His Leu Ser Val Ser Thr Pro Val Thr Gln Gly Gly Thr Val Lys Val  
                                  2515                      2520                      2525  
 Leu Thr Gln Gly Ile Asn Thr Pro Pro Val Leu Val His Asn Gln Leu  
                                  2530                      2535                      2540  
 Val Leu Thr Pro Ser Ile Val Thr Thr Asn Lys Lys Leu Ala Asp Pro  
 2545                      2550                      2555                      2560  
 Val Thr Leu Lys Ile Glu Thr Lys Val Leu Gln Pro Ala Asn Leu Gly  
                                  2565                      2570                      2575  
 Ser Thr Leu Thr Pro His His Pro Pro Ala Leu Pro Ser Lys Leu Pro  
                                  2580                      2585                      2590  
 Thr Glu Val Asn His Val Pro Ser Gly Pro Ser Ile Pro Ala Asp Arg  
                                  2595                      2600                      2605  
 Thr Val Ser His Leu Ala Ala Ala Lys Leu Asp Ala His Ser Pro Arg  
                                  2610                      2615                      2620  
 Pro Ser Gly Pro Gly Pro Ser Ser Phe Pro Arg Ala Ser His Pro Ser  
 2625                      2630                      2635                      2640  
 Ser Thr Ala Ser Thr Ala Leu Ser Thr Asn Ala Thr Val Met Leu Ala  
                                  2645                      2650                      2655  
 Ala Gly Ile Pro Val Pro Gln Phe Ile Ser Ser Ile His Pro Glu Gln

2660	2665	2670
Ser Val Ile Met Pro Pro His Ser Ile Thr Gln Thr Val Ser Leu Ser		
2675	2680	2685
His Leu Ser Gln Gly Glu Val Arg Met Asn Thr Pro Thr Leu Pro Ser		
2690	2695	2700
Ile Thr Tyr Ser Ile Arg Pro Glu Ala Leu His Ser Pro Arg Ala Pro		
2705	2710	2715
Leu Gln Pro Gln Gln Ile Glu Val Arg Ala Pro Gln Arg Ala Ser Thr		
2725	2730	2735
Pro Gln Pro Ala Pro Ala Gly Val Pro Ala Leu Ala Ser Gln His Pro		
2740	2745	2750
Pro Glu Glu Glu Val His Tyr His Leu Pro Val Ala Arg Ala Thr Ala		
2755	2760	2765
Pro Val Gln Ser Glu Val Leu Val Met Gln Ser Glu Tyr Arg Leu His		
2770	2775	2780
Pro Tyr Thr Val Pro Arg Asp Val Arg Ile Met Val His Pro His Val		
2785	2790	2795
Thr Ala Val Ser Glu Gln Pro Arg Ala Ala Asp Gly Val Val Lys Val		
2805	2810	2815
Pro Pro Ala Ser Lys Ala Pro Gln Gln Pro Gly Lys Glu Ala Ala Lys		
2820	2825	2830
Thr Pro Asp Ala Lys Ala Ala Pro Thr Pro Thr Pro Ala Pro Val Pro		
2835	2840	2845
Val Pro Val Pro Leu Pro Ala Pro Ala Pro Ala Pro His Gly Glu Ala		
2850	2855	2860
Arg Ile Leu Thr Val Thr Pro Ser Asn Gln Leu Gln Gly Leu Pro Leu		
2865	2870	2875
Thr Pro Pro Val Val Thr His Gly Val Gln Ile Val His Ser Ser		
2885	2890	2895
Gly Glu Leu Phe Gln Glu Tyr Arg Tyr Gly Asp Ile Arg Thr Tyr His		
2900	2905	2910
Pro Pro Ala Gln Leu Thr His Thr Gln Phe Pro Ala Ala Ser Ser Val		
2915	2920	2925
Gly Leu Pro Ser Arg Thr Lys Thr Ala Ala Gln Gly Pro Pro Pro Glu		
2930	2935	2940
Gly Glu Pro Leu Gln Pro Pro Gln Pro Val Gln Ser Thr Gln Pro Ala		
2945	2950	2955
Gln Pro Ala Pro Pro Cys Pro Pro Ser Gln Leu Gly Gln Pro Gly Gln		
2965	2970	2975
Pro Pro Ser Ser Lys Met Pro Gln Val Ser Gln Glu Ala Lys Gly Thr		
2980	2985	2990
Gln Thr Gly Val Glu Gln Pro Arg Leu Pro Ala Gly Pro Ala Asn Arg		
2995	3000	3005
Pro Pro Glu Pro His Thr Gln Val Gln Arg Ala Gln Ala Glu Thr Gly		
3010	3015	3020
Pro Thr Ser Phe Pro Ser Pro Val Ser Val Ser Met Lys Pro Asp Leu		
3025	3030	3035
Pro Val Ser Leu Pro Thr Gln Thr Ala Pro Lys Gln Pro Leu Phe Val		
3045	3050	3055
Pro Thr Thr Ser Gly Pro Ser Thr Pro Pro Gly Leu Val Leu Pro His		
3060	3065	3070
Thr Glu Phe Gln Pro Ala Pro Lys Gln Asp Ser Ser Pro His Leu Thr		
3075	3080	3085
Ser Gln Arg Pro Val Asp Met Val Gln Leu Leu Lys Lys Tyr Pro Ile		

3090                      3095                      3100  
 Val Trp Gln Gly Leu Leu Ala Leu Lys Asn Asp Thr Ala Ala Val Gln  
 3105                      3110                      3115                      3120  
 Leu His Phe Val Ser Gly Asn Asn Val Leu Ala His Arg Ser Leu Pro  
                     3125                      3130                      3135  
 Leu Ser Glu Gly Gly Pro Pro Leu Arg Ile Ala Gln Arg Met Arg Leu  
                     3140                      3145                      3150  
 Glu Ala Thr Gln Leu Glu Gly Val Ala Arg Arg Met Thr Leu Ala Ser  
                     3155                      3160                      3165  
 Ala Ser Val Glu Thr Asp Tyr Cys Leu Leu Leu Ala Leu Pro Cys Gly  
                     3170                      3175                      3180  
 Arg Asp Gln Glu Asp Val Val Ser Gln Thr Glu Ser Leu Lys Ala Ala  
 3185                      3190                      3195                      3200  
 Phe Ile Thr Tyr Leu Gln Ala Lys Gln Ala Ala Gly Ile Ile Asn Val  
                     3205                      3210                      3215  
 Pro Asn Pro Gly Ser Asn Gln Pro Ala Tyr Val Leu Gln Ile Phe Pro  
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 Pro Cys Glu Phe Ser Glu Ser His Leu Ser Arg Leu Ala Pro Asp Leu  
                     3235                      3240                      3245  
 Leu Ala Ser Ile Ser Asn Ile Ser Pro His Leu Met Ile Val Ile Ala  
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 Ser Val  
 3265

&lt;210&gt; 4511

&lt;211&gt; 1375

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4511

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 120  
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 240  
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 360  
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 420  
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 480  
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 660  
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 720

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1260  
aaagcattgc actgtacctc tcgtaacaca gcaatacagt cctcttgagg cactcaagcc  
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1375

&lt;210&gt; 4512

&lt;211&gt; 244

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4512

Ala	Gly	Arg	Thr	Arg	Ser	Leu	Pro	Ile	Thr	Ile	Glu	Met	Leu	Lys	Val
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Pro	Asp	Asp	Glu	Glu	Glu	Glu	Glu	Gln	Thr	Cys	Pro	Ser	Thr	Phe	Ser
			20					25					30		
Glu	Glu	Met	Thr	Pro	Thr	Ser	Val	Ile	Pro	Lys	Leu	Pro	Gln	Cys	Leu
		35				40					45				
Arg	Glu	Glu	Glu	Glu	Lys	Glu	Ser	Asp	Ser	Asp	Ser	Glu	Gly	Pro	Ile
	50				55					60					
Gln	Tyr	Arg	Asp	Glu	Glu	Asp	Glu	Asp	Glu	Ser	Tyr	Gln	Ser	Ala	Leu
65				70				75						80	
Ala	Asn	Lys	Val	Lys	Arg	Lys	Asp	Thr	Leu	Ala	Met	Lys	Leu	Asn	His
			85					90						95	
Arg	Pro	Ser	Glu	Pro	Glu	Leu	Asn	Leu	Asn	Ser	Trp	Pro	Cys	Lys	Ser
		100					105					110			
Lys	Glu	Glu	Trp	Asn	Glu	Ile	Arg	His	Gln	Ile	Gly	Asn	Thr	Leu	Ile
		115				120					125				
Arg	Arg	Leu	Ser	Gln	Arg	Pro	Thr	Pro	Glu	Glu	Leu	Glu	Gln	Arg	Asn
	130				135						140				
Ile	Leu	Gln	Pro	Lys	Asn	Glu	Ala	Asp	Arg	Gln	Ala	Glu	Lys	Arg	Glu
145				150					155					160	
Ile	Lys	Arg	Arg	Leu	Thr	Arg	Lys	Leu	Ser	Gln	Arg	Pro	Thr	Val	Ala
			165					170						175	
Glu	Leu	Leu	Ala	Arg	Lys	Ile	Leu	Arg	Phe	Asn	Glu	Tyr	Val	Glu	Val
		180					185						190		
Thr	Asp	Ala	Gln	Asp	Tyr	Asp	Arg	Arg	Ala	Asp	Lys	Pro	Trp	Thr	Lys

	195		200		205										
Leu	Thr	Pro	Ala	Asp	Lys	Ala	Ala	Ile	Arg	Lys	Glu	Leu	Asn	Glu	Phe
	210				215						220				
Lys	Ser	Ser	Glu	Met	Glu	Val	His	Glu	Glu	Ser	Lys	His	Phe	Thr	Arg
225					230					235					240
Tyr	His	Arg	Pro												

<210> 4513  
 <211> 545  
 <212> DNA  
 <213> Homo sapiens

<400> 4513  
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 120  
 tcagcacctg caccocggggg ttggggccctg gggcttcctt cccagtccag cctctcagct  
 180  
 cctgtctgtg gcttagcacg tgcaccacag agccaaccag atcctctgta aacttttggg  
 240  
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 300  
 tctcctcgga gtttcctttc aacagggtggg acatggatgc tgtgaactgc tcctggggaca  
 360  
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 420  
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 545

<210> 4514  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

<400> 4514  
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 1 5 10 15  
 Lys Ala Lys Gly Pro Ser Glu Asn Val Ser Gln Glu Gln Phe Thr Ala  
 20 25 30  
 Ser Met Ser His Leu Leu Lys Gly Asn Ser Glu Glu Lys Ser Leu Met  
 35 40 45  
 Ile Met Lys Met Ile Ser Ala Thr Glu Gly Pro Val Lys Ala Arg Glu  
 50 55 60  
 Val Gln Lys Phe Thr Glu Asp Leu Val Gly Ser Val Val His Val Leu  
 65 70 75 80  
 Ser His Arg Gln Glu Leu Arg Gly Trp Thr Gly Lys Glu Ala Pro Gly  
 85 90 95  
 Pro Asn Pro Arg Val Gln Val Leu Thr Ala Gln Leu Leu Ser Asp Met



100 105 110  
 Lys Leu Gln Gly Lys Cys Ala Trp Thr Arg  
 115 120

<210> 4515  
 <211> 3207  
 <212> DNA  
 <213> Homo sapiens

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 120  
 tcggaacctg gccggggccc tccaccgcgc ccgtgggtccc ggtgggtgag ccccggtggc  
 180  
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 840  
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 1020  
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 1080  
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 1140  
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 1200  
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1980  
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2340  
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2400  
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2640  
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2760  
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2940

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<210> 4516

<211> 901

<212> PRT

<213> Homo sapiens

<400> 4516

Met	Glu	Phe	Val	Arg	Ala	Leu	Trp	Leu	Gly	Leu	Ala	Leu	Ala	Leu	Gly
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			20					25					30		
Leu	Gly	Gly	Ser	Val	Arg	Leu	Gly	Ala	Leu	Leu	Pro	Arg	Ala	Pro	Leu
			35					40					45		
Ala	Arg	Ala	Arg	Ala	Arg	Ala	Leu	Ala	Arg	Ala	Ala	Leu	Ala	Pro	
			50					55				60			
Arg	Leu	Pro	His	Asn	Leu	Ser	Leu	Glu	Leu	Val	Val	Ala	Ala	Pro	Pro
				70						75				80	
Ala	Arg	Asp	Pro	Ala	Ser	Leu	Thr	Arg	Gly	Leu	Cys	Gln	Ala	Leu	Val
				85						90				95	
Pro	Pro	Gly	Val	Ala	Ala	Leu	Leu	Ala	Phe	Pro	Glu	Ala	Arg	Pro	Glu
			100					105					110		
Leu	Leu	Gln	Leu	His	Phe	Leu	Ala	Ala	Ala	Thr	Glu	Thr	Pro	Val	Leu
			115					120					125		
Ser	Leu	Leu	Arg	Arg	Glu	Ala	Arg	Ala	Pro	Leu	Gly	Ala	Pro	Asn	Pro
			130					135				140			
Phe	His	Leu	Gln	Leu	His	Trp	Ala	Ser	Pro	Leu	Glu	Thr	Leu	Leu	Asp
				150						155				160	
Val	Leu	Val	Ala	Val	Leu	Gln	Ala	His	Ala	Trp	Glu	Asp	Val	Gly	Leu
				165						170				175	
Ala	Leu	Cys	Arg	Thr	Gln	Asp	Pro	Gly	Gly	Leu	Val	Ala	Leu	Trp	Thr
			180					185					190		
Ser	Arg	Ala	Gly	Arg	Pro	Pro	Gln	Leu	Val	Leu	Asp	Leu	Ser	Arg	Arg
			195				200					205			
Asp	Thr	Gly	Asp	Ala	Gly	Leu	Arg	Ala	Arg	Leu	Ala	Pro	Met	Ala	Ala
			210				215				220				
Pro	Val	Gly	Gly	Glu	Ala	Pro	Val	Pro	Ala	Ala	Val	Leu	Leu	Gly	Cys
			225			230				235				240	
Asp	Ile	Ala	Arg	Ala	Arg	Arg	Val	Leu	Glu	Ala	Val	Pro	Pro	Gly	Pro
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His	Trp	Leu	Leu	Gly	Thr	Pro	Leu	Pro	Pro	Lys	Ala	Leu	Pro	Thr	Ala
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Gly	Leu	Pro	Pro	Gly	Leu	Leu	Ala	Leu	Gly	Glu	Val	Ala	Arg	Pro	Pro
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Leu	Glu	Ala	Ala	Ile	His	Asp	Ile	Val	Gln	Leu	Val	Ala	Arg	Ala	Leu

290		295		300
Gly Ser Ala Ala Gln Val Gln Pro Lys Arg Ala Leu Leu Pro Ala Pro				
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Val Asn Cys Gly Asp Leu Gln Pro Ala Gly Pro Glu Ser Pro Gly Arg				
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Phe Leu Ala Arg Phe Leu Ala Asn Thr Ser Phe Gln Gly Arg Thr Gly				
	340		345	350
Pro Val Trp Val Thr Gly Ser Ser Gln Val His Met Ser Arg His Phe				
	355		360	365
Lys Val Trp Ser Leu Arg Arg Asp Pro Arg Gly Ala Pro Ala Trp Ala				
	370		375	380
Thr Val Gly Ser Trp Arg Tyr Gly Gln Leu Asp Leu Glu Pro Gly Gly				
385		390		395
Ala Ser Ala Trp Pro Pro Pro Pro Gln Gly Ala Gln Val Arg Pro Lys				
	405		410	415
Leu Arg Val Val Thr Leu Leu Glu His Pro Phe Val Phe Ala Arg Asp				
	420		425	430
Pro Asp Glu Asp Gly Gln Cys Pro Ala Gly Gln Leu Cys Leu Asp Pro				
	435		440	445
Gly Thr Asn Asp Ser Ala Thr Leu Asp Ala Leu Phe Ala Ala Leu Ala				
	450		455	460
Asn Gly Ser Ala Pro Arg Ala Leu Arg Lys Cys Cys Tyr Gly Tyr Cys				
465		470		475
Ile Asp Leu Leu Glu Arg Leu Ala Glu Asp Thr Pro Phe Asp Phe Glu				
	485		490	495
Leu Tyr Leu Val Gly Asp Gly Lys Tyr Gly Ala Leu Arg Asp Gly Arg				
	500		505	510
Trp Thr Gly Leu Val Gly Asp Leu Leu Ala Gly Arg Ala His Met Ala				
	515		520	525
Val Thr Ser Phe Ser Ile Asn Ser Ala Arg Ser Gln Val Val Asp Phe				
	530		535	540
Thr Ser Pro Phe Phe Ser Thr Ser Leu Gly Ile Met Val Arg Ala Arg				
545		550		555
Asp Thr Ala Ser Pro Ile Gly Ala Phe Met Trp Pro Leu His Trp Ser				
	565		570	575
Thr Trp Leu Gly Val Phe Ala Ala Leu His Leu Thr Ala Leu Phe Leu				
	580		585	590
Thr Val Tyr Glu Trp Arg Ser Pro Tyr Gly Leu Thr Pro Arg Gly Arg				
	595		600	605
Asn Arg Ser Thr Val Phe Ser Tyr Ser Ser Ala Leu Asn Leu Cys Tyr				
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Ala Ile Leu Phe Arg Arg Thr Val Ser Ser Lys Thr Pro Lys Cys Pro				
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Thr Gly Arg Leu Leu Met Asn Leu Trp Ala Ile Phe Cys Leu Leu Val				
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Leu Ser Ser Tyr Thr Ala Asn Leu Ala Val Met Val Gly Asp Lys				
	660		665	670
Thr Phe Glu Glu Leu Ser Gly Ile His Asp Pro Lys Leu His His Pro				
	675		680	685
Ala Gln Gly Phe Arg Phe Gly Thr Val Trp Glu Ser Ser Ala Glu Ala				
	690		695	700
Tyr Ile Lys Lys Ser Phe Pro Asp Met His Ala His Met Arg Arg His				
705		710		715
Ser Ala Pro Thr Thr Pro Arg Gly Val Ala Met Leu Thr Ser Asp Pro				

725										730				735			
Pro	Lys	Leu	Asn	Ala	Phe	Ile	Met	Asp	Lys	Ser	Leu	Leu	Asp	Tyr	Glu		
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Val	Ser	Ile	Asp	Ala	Asp	Cys	Lys	Leu	Leu	Thr	Val	Gly	Lys	Pro	Phe		
755										760				765			
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Ser	Asn	Leu	Ser	Glu	Phe	Ile	Ser	Arg	Tyr	Lys	Ser	Ser	Gly	Phe	Ile		
785										790				795			
Asp	Leu	Leu	His	Asp	Lys	Trp	Tyr	Lys	Met	Val	Pro	Cys	Gly	Lys	Arg		
805										810				815			
Val	Phe	Ala	Val	Thr	Glu	Thr	Leu	Gln	Met	Ser	Ile	Tyr	His	Phe	Ala		
820										825				830			
Gly	Leu	Phe	Val	Leu	Leu	Cys	Leu	Gly	Leu	Gly	Ser	Ala	Leu	Leu	Ser		
835										840				845			
Ser	Leu	Gly	Glu	His	Ala	Phe	Phe	Arg	Leu	Ala	Leu	Pro	Arg	Ile	Arg		
850										855				860			
Lys	Gly	Ser	Arg	Leu	Gln	Tyr	Trp	Leu	His	Thr	Ser	Gln	Lys	Ile	His		
865										870				875			
Arg	Ala	Leu	Asn	Thr	Glu	Pro	Pro	Glu	Gly	Ser	Lys	Glu	Glu	Thr	Ala		
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Glu	Ala	Glu	Pro	Arg													
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<210> 4517
<211> 2275
<212> DNA
<213> Homo sapiens
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120
gaggagcccc tggtggggg gaagccgggt gcggacggtg gcagcctgga ggccgtgagg
180
ctggggccct cgtcaggcct cctagtggac tggtggaaa tgctggacct cgaggtggtc
240
agcagctgcc ccgacctgca gctcaggctg ctcttctccc ggaggaaggg caaaggtcag
300
gcccaggtgc cctcgttccg tccctacctc ctgacctct tcaacgatca gtccagctgg
360
cccacactgc accagtgcac ccgagtcctg ctgggcaaga gccgggaaca gaggttcgac
420
ccctctgcct ctctggactt cctctgggce tgcattcatg ttctctcgcat ctggcagggg
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540
gagctcatca gcctggtgga gctgacctg gccgaggcgg agacgaggag ccaggacggg
600
gacacagccg cctgcagcct catccaggcc cggtgcccc tgctgctcag ctgctgctgt
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720

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900  
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1020  
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1740  
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1920  
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1980  
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2040  
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2275

&lt;210&gt; 4518

&lt;211&gt; 650

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4518

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          20          25          30
Val Ser Ser Leu Leu Leu Gln Glu Glu Glu Pro Leu Ala Gly Gly Lys
          35          40          45
Pro Gly Ala Asp Gly Gly Ser Leu Glu Ala Val Arg Leu Gly Pro Ser
          50          55          60
Ser Gly Leu Leu Val Asp Trp Leu Glu Met Leu Asp Pro Glu Val Val
65          70          75          80
Ser Ser Cys Pro Asp Leu Gln Leu Arg Leu Leu Phe Ser Arg Arg Lys
          85          90          95
Gly Lys Gly Gln Ala Gln Val Pro Ser Phe Arg Pro Tyr Leu Leu Thr
          100          105          110
Leu Phe Thr His Gln Ser Ser Trp Pro Thr Leu His Gln Cys Ile Arg
          115          120          125
Val Leu Leu Gly Lys Ser Arg Glu Gln Arg Phe Asp Pro Ser Ala Ser
          130          135          140
Leu Asp Phe Leu Trp Ala Cys Ile His Val Pro Arg Ile Trp Gln Gly
145          150          155          160
Arg Asp Gln Arg Thr Pro Gln Lys Arg Arg Glu Glu Leu Val Leu Arg
          165          170          175
Val Gln Gly Pro Glu Leu Ile Ser Leu Val Glu Leu Ile Leu Ala Glu
          180          185          190
Ala Glu Thr Arg Ser Gln Asp Gly Asp Thr Ala Ala Cys Ser Leu Ile
          195          200          205
Gln Ala Arg Leu Pro Leu Leu Leu Ser Cys Cys Cys Gly Asp Asp Glu
          210          215          220
Ser Val Arg Lys Val Thr Glu His Leu Ser Gly Cys Ile Gln Gln Trp
225          230          235          240
Gly Asp Ser Val Leu Gly Arg Arg Cys Arg Asp Leu Leu Leu Gln Leu
          245          250          255
Tyr Leu Gln Arg Pro Glu Leu Arg Val Pro Val Pro Glu Val Leu Leu
          260          265          270
His Ser Glu Gly Ala Ala Ser Ser Ser Val Cys Lys Leu Asp Gly Leu
          275          280          285
Ile His Arg Phe Ile Thr Leu Leu Ala Asp Thr Ser Asp Ser Arg Ala
          290          295          300
Leu Glu Asn Arg Gly Ala Asp Ala Ser Met Ala Cys Arg Lys Leu Ala
305          310          315          320
Val Ala His Pro Leu Leu Leu Leu Arg His Leu Pro Met Ile Ala Ala
          325          330          335
Leu Leu His Gly Arg Thr His Leu Asn Phe Gln Glu Phe Arg Gln Gln
          340          345          350
Asn His Leu Ser Cys Phe Leu His Val Leu Gly Leu Leu Glu Leu Leu
          355          360          365
Gln Pro His Val Phe Arg Ser Glu His Gln Gly Ala Leu Trp Asp Cys
          370          375          380
Leu Leu Ser Phe Ile Arg Leu Leu Leu Asn Tyr Arg Lys Ser Ser Arg

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385          390          395          400
His Leu Ala Ala Phe Ile Asn Lys Phe Val Gln Phe Ile His Lys Tyr
          405          410          415
Ile Thr Tyr Asn Ala Pro Ala Ala Ile Ser Phe Leu Gln Lys His Ala
          420          425          430
Asp Pro Leu His Asp Leu Ser Phe Asp Asn Ser Asp Leu Val Met Leu
          435          440          445
Lys Ser Leu Leu Ala Gly Leu Ser Leu Pro Ser Arg Asp Asp Arg Thr
          450          455          460
Asp Arg Gly Leu Asp Glu Glu Gly Glu Glu Glu Ser Ser Ala Gly Ser
465          470          475          480
Leu Pro Leu Val Ser Val Ser Leu Phe Thr Pro Leu Thr Ala Ala Glu
          485          490          495
Met Ala Pro Tyr Met Lys Arg Leu Ser Arg Gly Gln Thr Val Glu Gly
          500          505          510
Glu Ser Gly Pro Ala Ser Pro Thr Pro Asp Leu Leu Glu Val Leu Ser
          515          520          525
Asp Ile Asp Glu Met Ser Arg Arg Arg Pro Glu Ile Leu Ser Phe Phe
          530          535          540
Ser Thr Asn Leu Gln Arg Leu Met Ser Ser Ala Glu Glu Cys Cys Arg
545          550          555          560
Asn Leu Ala Phe Ser Leu Ala Leu Arg Ser Met Gln Asn Ser Pro Ser
          565          570          575
Ile Ala Ala Ala Phe Leu Pro Thr Phe Met Tyr Cys Leu Gly Ser Gln
          580          585          590
Asp Phe Glu Val Val Gln Thr Ala Leu Arg Asn Leu Pro Glu Tyr Ala
          595          600          605
Leu Leu Cys Gln Glu His Ala Ala Val Leu Leu His Arg Ala Phe Leu
          610          615          620
Val Gly Met Tyr Gly Gln Met Asp Pro Ser Ala Gln Ile Ser Glu Ala
625          630          635          640
Leu Arg Ile Leu His Met Glu Ala Val Met
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&lt;210&gt; 4519

&lt;211&gt; 2326

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4519

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120
acagacaact atccggctta cggccagggg agcccctgca gctgcacaga accagtttct
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420

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960  
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1020  
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1080  
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1200  
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<210> 4520

<211> 617

<212> PRT

<213> Homo sapiens

<400> 4520

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			20					25						30	
Thr	Asn	Cys	Lys	Gln	Ala	Glu	Arg	Pro	Asn	Asn	Gln	Gln	Asn	Cys	Phe
		35					40					45			
Lys	Val	Cys	Asp	Trp	His	Lys	Glu	Leu	Tyr	Asp	Trp	Arg	Leu	Gly	Pro
	50					55				60					
Trp	Asn	Gln	Cys	Gln	Pro	Val	Ile	Ser	Lys	Ser	Leu	Glu	Lys	Pro	Leu
65					70					75				80	
Glu	Cys	Ile	Lys	Gly	Glu	Glu	Gly	Ile	Gln	Val	Arg	Glu	Ile	Ala	Cys
			85						90					95	
Ile	Gln	Lys	Asp	Lys	Asp	Ile	Pro	Ala	Glu	Asp	Ile	Ile	Cys	Glu	Tyr
			100					105					110		
Phe	Glu	Pro	Lys	Pro	Leu	Leu	Glu	Gln	Ala	Cys	Leu	Ile	Pro	Cys	Gln
	115						120					125			
Gln	Asp	Cys	Ile	Val	Ser	Glu	Phe	Ser	Ala	Trp	Ser	Glu	Cys	Ser	Lys
	130					135					140				
Thr	Cys	Gly	Ser	Gly	Leu	Gln	His	Arg	Thr	Arg	His	Val	Val	Ala	Pro
145					150					155				160	
Pro	Gln	Phe	Gly	Gly	Ser	Gly	Cys	Pro	Asn	Leu	Thr	Glu	Phe	Gln	Val
			165					170						175	
Cys	Gln	Ser	Ser	Pro	Cys	Glu	Ala	Glu	Glu	Leu	Arg	Tyr	Ser	Leu	His
		180						185					190		
Val	Gly	Pro	Trp	Ser	Thr	Cys	Ser	Met	Pro	His	Ser	Arg	Gln	Val	Arg
	195						200					205			
Gln	Ala	Arg	Arg	Arg	Gly	Lys	Asn	Lys	Glu	Arg	Glu	Lys	Asp	Arg	Ser
	210					215					220				
Lys	Gly	Val	Lys	Asp	Pro	Glu	Ala	Arg	Glu	Leu	Ile	Lys	Lys	Lys	Arg
225				230						235				240	
Asn	Arg	Asn	Arg	Gln	Asn	Arg	Gln	Glu	Asn	Lys	Tyr	Trp	Asp	Ile	Gln
			245					250						255	
Ile	Gly	Tyr	Gln	Thr	Arg	Glu	Val	Met	Cys	Ile	Asn	Lys	Thr	Gly	Lys
		260						265					270		
Ala	Ala	Asp	Leu	Ser	Phe	Cys	Gln	Gln	Glu	Lys	Leu	Pro	Met	Thr	Phe
		275					280						285		
Gln	Ser	Cys	Val	Ile	Thr	Lys	Glu	Cys	Gln	Val	Ser	Glu	Trp	Ser	Glu

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Lys Glu Cys Pro Glu Phe Glu Glu Lys Glu Pro Cys Leu Ser Gln Gly
      340              345              350
Asp Gly Val Val Pro Cys Ala Thr Tyr Gly Trp Arg Thr Thr Glu Trp
      355              360              365
Thr Glu Cys Arg Val Asp Pro Leu Leu Ser Gln Gln Asp Lys Arg Arg
      370              375              380
Gly Asn Gln Thr Ala Leu Cys Gly Gly Gly Ile Gln Thr Arg Glu Val
385              390              395              400
Tyr Cys Val Gln Ala Asn Glu Asn Leu Leu Ser Gln Leu Ser Thr His
      405              410              415
Lys Asn Lys Glu Ala Ser Lys Pro Met Asp Leu Lys Leu Cys Thr Gly
      420              425              430
Pro Ile Pro Asn Thr Thr Gln Leu Cys His Ile Pro Cys Pro Thr Glu
      435              440              445
Cys Glu Val Ser Pro Trp Ser Ala Trp Gly Pro Cys Thr Tyr Glu Asn
      450              455              460
Cys Asn Asp Pro Gln Gly Lys Lys Gly Phe Lys Leu Arg Lys Arg Arg
465              470              475              480
Ile Thr Asn Glu Pro Thr Gly Gly Ser Gly Leu Thr Gly Asn Cys Pro
      485              490              495
His Leu Leu Glu Ala Ile Pro Cys Glu Pro Ala Cys Tyr Asp Trp
      500              505              510
Lys Ala Val Arg Leu Gly Asp Cys Glu Pro Asp Asn Gly Lys Glu Cys
      515              520              525
Gly Pro Gly Thr Gln Val Gln Glu Val Val Cys Ile Asn Ser Asp Gly
      530              535              540
Glu Glu Val Asp Arg Gln Leu Cys Arg Asp Ala Ile Phe Pro Ile Pro
545              550              555              560
Val Ala Cys Asp Ala Pro Cys Pro Lys Asp Cys Val Leu Ser Thr Trp
      565              570              575
Ser Thr Trp Ser Ser Cys Ser His Thr Cys Ser Gly Lys Thr Thr Glu
      580              585              590
Gly Lys Gln Ile Arg Ala Arg Ser Ile Leu Ala Tyr Ala Gly Glu Glu
      595              600              605
Gly Glu Ser Pro Ala Ser Asp Ala Ile
      610              615

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&lt;210&gt; 4521

&lt;211&gt; 1071

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4521

nagattccta taaaggatca tgaattagat gggtagtaga tttatccaca atgataaaga  
60

tcagaagaaa tgaataatg ccttcaaacy actgaggaaa aataattatt aacctataat  
120

ttataccaat ataaacaatt actcaggaaa aaaagaaaat aaaaacttgc aagggctaaa  
180

ataacttgct taccaccaa gatgcttgct ctaagaactg tgaagggatt caagaggaaa  
 240  
 agtacacca gagagggtc atacatgtcc tctccccctc ctctccacc accaggacac  
 300  
 acagaaactg cctcctcttt tcagccctct cccttctcag ctgactttga gctacaaata  
 360  
 tcccttctct acttgagag cccatttca ttacaggaat ttgctttgag ttttattatc  
 420  
 attttagtct atgtcttaga ttgggctgct ataacaaggt gccataggct gagcggctta  
 480  
 aacaacaaac actcatatcc cacagttaca gaggctgaga agcctggggt caaggtacca  
 540  
 gcatggctctg attctgttct ggaggctggg aaatccaaga tggaagcact ggtaggtttg  
 600  
 gtgtctggga gggcttctct ctgcttccaa gatggtgcct tgtcgtgca tcttccagag  
 660  
 ggaaggaatg ctgtgtcctt gcagcacaga agaaacacat ctgaaaagaa atcaagcaga  
 720  
 aaagttgaaa ataaagagat ggaatatata tatgaaaact actacatata ggaagggatg  
 780  
 tagcaaagac acagagagaa tataatttaa ggcaaaaagc ttcaatagga tttcaaagca  
 840  
 aaccttgcat actaaaaaaaa ggaaacaaaa aataaaccaa aagaaaccga aaaccatgaa  
 900  
 cttgcaggag aattttccaa agccgtaatt ataatgagag tgtttttaag tctataagaa  
 960  
 attaatatat caaacaata aagattaata agaatttgga atttgatga aatggcaaag  
 1020  
 gaaaagccag gcgtgggtggc ttacgcctgt aatgccagca ctttgggagg c  
 1071

&lt;210&gt; 4522

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4522

Met	Leu	Ala	Leu	Arg	Thr	Val	Lys	Gly	Phe	Lys	Arg	Lys	Ser	Thr	Pro
1				5					10					15	
Arg	Glu	Gly	Ser	Tyr	Met	Ser	Ser	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Gly
			20					25					30		
His	Thr	Glu	Thr	Ala	Ser	Ser	Phe	Gln	Pro	Ser	Pro	Phe	Ser	Ala	Asp
		35					40					45			
Phe	Glu	Leu	Gln	Ile	Ser	Leu	Leu	Tyr	Leu	Glu	Ser	Pro	Ile	Ser	Leu
	50					55				60					
Gln	Glu	Phe	Ala	Leu	Ser	Phe	Ile	Ile	Ile	Leu	Val	Tyr	Val	Leu	Asp
65				70						75				80	
Trp	Ala	Ala	Ile	Thr	Arg	Cys	His	Arg	Leu	Ser	Gly	Leu	Asn	Asn	Lys
			85					90					95		
His	Ser	Tyr	Pro	Thr	Val	Thr	Glu	Ala	Glu	Lys	Pro	Gly	Val	Lys	Val
		100					105					110			
Pro	Ala	Trp	Ser	Asp	Ser	Val	Leu	Glu	Ala	Gly	Lys	Ser	Lys	Met	Glu
	115						120				125				
Ala	Leu	Val	Gly	Leu	Val	Ser	Gly	Arg	Ala	Ser	Leu	Cys	Phe	Gln	Asp

130		135		140
Gly Ala Leu Ser Leu His Leu Pro Glu Gly Arg Asn Ala Val Ser Leu				
145		150		155
Gln His Arg Arg Asn Thr Ser Glu Lys Lys Ser Ser Arg Lys Val Glu				
	165		170	175
Asn Lys Glu Met Glu Tyr Ile Tyr Glu Asn Tyr Tyr Ile				
	180		185	

&lt;210&gt; 4523

&lt;211&gt; 1022

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4523

gcactgtata ttcttgtctg cacacgggac tcctcagctc gcctccttgg aaaaaccaag  
60  
gacactccca ggctgagtct cntcttggtg attctgggcg tcattctcat gaatggcaac  
120  
cgtgccagcg aggtctgcct ctggggaggca ctacgcaaga tgggactgcg ccctgggggtg  
180  
aggcacccat tcctcggcga tctgaggaag ctcatcacag atgactttgt gaagcagaag  
240  
tacctggaat acaagaagat cccaacagc aaccacctg agtatgaatt cctctggggc  
300  
ctgcgagccc gccatgagac cagcaagatg agggtcctga gattcatcgc ccagaatcag  
360  
aaccgagacc cccgggaatg gaaggctcat ttcttgaggg ctgtggatga tgctttcaag  
420  
acaatggatg tggatatggc cgaggaacat gccagggcc agatgagggc ccagatgaat  
480  
atcggggatg aagcgctgat tggacggtgg agctgggatg acatacaagt cgagctcctg  
540  
acctgggatg aggacggaga ttttgggcat gcctgggcca ggatccccct tgctttctgg  
600  
gccagatacc atcagtacat tctgaatagc aaccgtgcc aacaggaggc cacgtggaga  
660  
gctggcgta gcagtggcac caatggaggg gccagcacca gcgtcctaga tggccccagc  
720  
accagctcca ccatccggac cagaaatgct gccagagctg gcgccagctt cttctcctgg  
780  
atccagtagg agtttcggca ccgttgacga actgcagcga tcttactggc caagccagag  
840  
cgctcctct cagattcctt ctgcacacag caccctaggc ggcttcttcc tgtcagtcgg  
900  
agggtggcatg caagatgaag ctctctttgc tcttctgct ttcattttgt gcttttcctt  
960  
gtgttttcat gttttgggta tcagtgttac attaaagttg caaaattaaa aaaaaaaaaa  
1020  
aa  
1022

&lt;210&gt; 4524

&lt;211&gt; 262

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4524

Ala Leu Tyr Ile Leu Val Cys Thr Arg Asp Ser Ser Ala Arg Leu Leu  
 1 5 10 15  
 Gly Lys Thr Lys Asp Thr Pro Arg Leu Ser Leu Xaa Leu Val Ile Leu  
 20 25 30  
 Gly Val Ile Phe Met Asn Gly Asn Arg Ala Ser Glu Ala Val Leu Trp  
 35 40 45  
 Glu Ala Leu Arg Lys Met Gly Leu Arg Pro Gly Val Arg His Pro Phe  
 50 55 60  
 Leu Gly Asp Leu Arg Lys Leu Ile Thr Asp Asp Phe Val Lys Gln Lys  
 65 70 75 80  
 Tyr Leu Glu Tyr Lys Lys Ile Pro Asn Ser Asn Pro Pro Glu Tyr Glu  
 85 90 95  
 Phe Leu Trp Gly Leu Arg Ala Arg His Glu Thr Ser Lys Met Arg Val  
 100 105 110  
 Leu Arg Phe Ile Ala Gln Asn Gln Asn Arg Asp Pro Arg Glu Trp Lys  
 115 120 125  
 Ala His Phe Leu Glu Ala Val Asp Asp Ala Phe Lys Thr Met Asp Val  
 130 135 140  
 Asp Met Ala Glu Glu His Ala Arg Ala Gln Met Arg Ala Gln Met Asn  
 145 150 155 160  
 Ile Gly Asp Glu Ala Leu Ile Gly Arg Trp Ser Trp Asp Asp Ile Gln  
 165 170 175  
 Val Glu Leu Leu Thr Trp Asp Glu Asp Gly Asp Phe Gly Asp Ala Trp  
 180 185 190  
 Ala Arg Ile Pro Phe Ala Phe Trp Ala Arg Tyr His Gln Tyr Ile Leu  
 195 200 205  
 Asn Ser Asn Arg Ala Asn Arg Arg Ala Thr Trp Arg Ala Gly Val Ser  
 210 215 220  
 Ser Gly Thr Asn Gly Gly Ala Ser Thr Ser Val Leu Asp Gly Pro Ser  
 225 230 235 240  
 Thr Ser Ser Thr Ile Arg Thr Arg Asn Ala Ala Arg Ala Gly Ala Ser  
 245 250 255  
 Phe Phe Ser Trp Ile Gln  
 260

&lt;210&gt; 4525

&lt;211&gt; 1731

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4525

nngaaccatg gcattctcca ggctctgacc acagaagctt atgaatggga gccacgtgtt  
 60  
 gtgagtacag aggtggtcag agcccaagaa gaatgggaag ctgtggacac catccagcca  
 120  
 gagacagggga gccaagctag ctcagagcag cctgggcagc taatctcctt cagtgaggcc  
 180  
 ctgcagcact tccagactgt ggacctttcc cccttcaaga aaagaatcca gccaactatt  
 240  
 cgaaggactg ggctcgccgc cctccgacac tacctcttcg ggctccaaa gctccaccag  
 300

cgcttcggg aagaaagga cttggtcctg accattgctc agtgtggcct ggatagcaa  
360  
gaccagtgc atggccgagt cctccagacc atctataaga agctgaccgg ctccaagttt  
420  
gactgtgccc ttcattggaaa ccactgggag gacctgggct ttcagggagc gaatccagcc  
480  
acagacctga gaggcgagg cttccttgcc ctctgcac tcgtctacct agtgatggac  
540  
tcaaagacct tgccgatggc gcaggagatt ttccgcctgt ctgctacca catccagcaa  
600  
ttccctttct gtttgatgtc cgtgaacatc accacattg ccatccaggc cttgagagag  
660  
gagtgtctct ccagagagt taatcggcag cagaaggta tccccgtggg gaacagcttc  
720  
tatgccgcca cattcctcca cctcgcacat gtctggagga cacagcggaa gaccatctca  
780  
gactcgggct ttgtcctcaa aggtgtgctc tttcttctgg ggaggcctag gctgaatgca  
840  
cagtgtccca ggtccagaga gcccaagggtg gttgctagac tggttttggc tgcagttctt  
900  
ccccatccac actttctcaa attccagctt accaaaatct ccatcacca cccctggag  
960  
tctgctagtt ctctttctc tgccctgact gtcgccctt tctggtctta tacttatgac  
1020  
aagcatatat tctgatcaaa aattgggagc cagggtccaa tagttggact attcaaagtt  
1080  
gcaattgtgc agacaagta gagtgtgtgg tccctgtggc tgtagctggc tccctagcct  
1140  
acctctctgg tgatctctcc atctgaggct ccttcacttt ctctccatgg gataggggtt  
1200  
gggggtactc cctagagctg ctaggcttga ggccttgact gttgtgtcac ccagagcccc  
1260  
ctcaagcctt ctgctcccca attctctctg ttgcagagtt ggaagtattg gccagaaga  
1320  
gcccacggcg ggctgctcaa gacctggag ctgtacttgg ccagggtgtc aaaggacag  
1380  
gcctccttgt tgggagcaca gaagtgtat gggccagaag cccctccctt caaggatctc  
1440  
accttcacag gtgagagtga cctgcagtct cactcatccg aaggcgtatg gctgatctga  
1500  
cctccgagat gaatggaggc ttaaaggctg agctgcaggg gctttcaggg ggtcagtggg  
1560  
gccatgtcag gagcctggcc aggcgcacc cttgctgtc tcagcagatg ggatatagga  
1620  
agctcctggg cttagctgtg ggaagccaag taccctcacc ggcattggac atgaggggca  
1680  
gctagacttc acccccttcc cgcagacctg cctccagagc aaggagaatt c  
1731

&lt;210&gt; 4526

&lt;211&gt; 344

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4526

```

Xaa Asn His Gly Ile Leu Gln Ala Leu Thr Thr Glu Ala Tyr Glu Trp
1      5      10      15
Glu Pro Arg Val Val Ser Thr Glu Val Val Arg Ala Gln Glu Glu Trp
20     25     30
Glu Ala Val Asp Thr Ile Gln Pro Glu Thr Gly Ser Gln Ala Ser Ser
35     40     45
Glu Gln Pro Gly Gln Leu Ile Ser Phe Ser Glu Ala Leu Gln His Phe
50     55     60
Gln Thr Val Asp Leu Ser Pro Phe Lys Lys Arg Ile Gln Pro Thr Ile
65     70     75     80
Arg Arg Thr Gly Leu Ala Ala Leu Arg His Tyr Leu Phe Gly Pro Pro
85     90     95
Lys Leu His Gln Arg Leu Arg Glu Glu Arg Asp Leu Val Leu Thr Ile
100    105    110
Ala Gln Cys Gly Leu Asp Ser Gln Asp Pro Val His Gly Arg Val Leu
115    120    125
Gln Thr Ile Tyr Lys Lys Leu Thr Gly Ser Lys Phe Asp Cys Ala Leu
130    135    140
His Gly Asn His Trp Glu Asp Leu Gly Phe Gln Gly Ala Asn Pro Ala
145    150    155    160
Thr Asp Leu Arg Gly Ala Gly Phe Leu Ala Leu Leu His Leu Leu Tyr
165    170    175
Leu Val Met Asp Ser Lys Thr Leu Pro Met Ala Gln Glu Ile Phe Arg
180    185    190
Leu Ser Arg His His Ile Gln Gln Phe Pro Phe Cys Leu Met Ser Val
195    200    205
Asn Ile Thr His Ile Ala Ile Gln Ala Leu Arg Glu Glu Cys Leu Ser
210    215    220
Arg Glu Cys Asn Arg Gln Gln Lys Val Ile Pro Val Val Asn Ser Phe
225    230    235    240
Tyr Ala Ala Thr Phe Leu His Leu Ala His Val Trp Arg Thr Gln Arg
245    250    255
Lys Thr Ile Ser Asp Ser Gly Phe Val Leu Lys Gly Val Leu Phe Leu
260    265    270
Leu Gly Arg Pro Arg Leu Asn Ala Gln Cys Pro Arg Ser Arg Glu Pro
275    280    285
Lys Val Val Ala Arg Leu Val Leu Ala Ala Val Leu Pro His Pro His
290    295    300
Phe Leu Lys Phe Gln Leu Thr Lys Ile Ser Ile Thr His Pro Leu Glu
305    310    315    320
Ser Ala Ser Ser Pro Phe Ser Ala Leu Thr Val Ala Leu Phe Trp Ser
325    330    335
Tyr Thr Tyr Asp Lys His Ile Phe
340

```

&lt;210&gt; 4527

&lt;211&gt; 885

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4527

```

nnntttttttt tttttttttt tttttttttt tttttttttt cagagacatg
60

```





```

145                      150                      155                      160
Pro Pro Pro Trp Leu Ser Ile Ile Ser Asp Ser Gly Thr Gln Thr Pro
                      165                      170                      175
Ser Pro Arg Arg Cys Pro Ala Arg Pro Ser Pro Trp Gly Pro Gln Cys
                      180                      185                      190
Trp Arg Gly Gly Arg Ile Ala Ser Ala Glu Ala Ser Ser Thr
                      195                      200                      205

```

<210> 4529  
 <211> 546  
 <212> DNA  
 <213> Homo sapiens

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<400> 4529
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60
gtggccgccc cctaagctgc agccgccgga gccgcagaaa caagaggccg agccgtgtcg
120
aagatggagg agaaaccctc agggcccatc ccggacatgc tggccactgc agagcccagc
180
tccagtgaga ccgacaagga ggtgttgtcc ccggctgtgc cagctgcagc cccctcctcc
240
tccatgtcgg aggagccagg ccctgagcag gcagccacac cgccagtggg gaacgtggag
300
gggctggagg gatgcagcag ggctcctccc cagccccaga cagctgccag tctggccccg
360
gaccagccc tggcctgacc agcatagtct ccgggaccag cgaggacctg cggcctccca
420
gacgacgcc acctccaggg aagcaaattc cttgctccag ccctggctgc tgcctcagtt
480
ttcccagcgt ccgtgacctg gcacagcatc tgcgaacca ctgcccgcg agccctatgc
540
agtctc
546

```

<210> 4530  
 <211> 84  
 <212> PRT  
 <213> Homo sapiens

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<400> 4530
Met Glu Glu Lys Pro Ser Gly Pro Ile Pro Asp Met Leu Ala Thr Ala
1      5      10      15
Glu Pro Ser Ser Ser Glu Thr Asp Lys Glu Val Leu Ser Pro Ala Val
20     25     30
Pro Ala Ala Ala Pro Ser Ser Ser Met Ser Glu Glu Pro Gly Pro Glu
35     40     45
Gln Ala Ala Thr Pro Pro Val Gly Asn Val Glu Gly Leu Glu Gly Cys
50     55     60
Ser Arg Ala Pro Pro Gln Pro Gln Thr Ala Ala Ser Leu Ala Pro Asp
65     70     75     80
Pro Ala Leu Ala

```

<210> 4531  
<211> 1414  
<212> DNA  
<213> Homo sapiens

<400> 4531  
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60  
gccggtccct tgcagggcgg tggggcccgg gccctggacc tactccgggg cctgccgcgt  
120  
gtgagcctgg ccaacttaaa gccgaatccc ggctccaaga aaccggagag aagaccaaga  
180  
ggtcggagaa gaggtagaaa atgtggcaga ggccataaag gagaaaggca aagaggaacc  
240  
cggccccgct tgggctttga gggaggccag actccatttt acatccgaat cccaaaatac  
300  
gggtttaacg aaggacatag ttccagacgc cagtataagc ctttgagtct caatagactg  
360  
cagtatctta ttgatttggg tcgtgttgat cctagtcaac ctattgactt aaccagctt  
420  
gtcaatggga gaggtgtgac catccagcca cttaaaaggg attatggtgt ccagctggtt  
480  
gaggaggggtg ctgacacctt tacggcaaaa gttaatatg aagtacagtt ggcttcagaa  
540  
ctagctattg ctgccattga aaaaaatggt ggtgttgta ctacagcctt ctatgatcca  
600  
agaagtctgg acattgtatg caaacctggt ccattctttc ttcgtggaca acccattcca  
660  
aaaagaatgc ttccaccaga agaactggta ccatattaca ctgatgcaaa gaaccgtggg  
720  
tacctggcgg atcctgcaa atttcctgaa gcacgacttg aactcgccag gaagtatggt  
780  
tatatcttac ctgatcac taaagatgaa ctcttcaaaa tgctctgtac taggaaggat  
840  
ccaaggcaga ttttctttgg tcttgctcca ggatgggtgg tgaatatggc cgataagaaa  
900  
atcctaaaac ctacagatga aaatctcctt aagtattata cctcatgaat tcccgtccaa  
960  
ggaagcagag ttgttaaaga gtactggaat aggggctgaa ggatctatat tcccttattg  
1020  
cattttcctt atgtataatt ttccagatgg tgatgttact tttcagtga ctcatatgtc  
1080  
tcattttcat ctaaaattaa atggcaggaa acaaggactg catagagaaa ctgagtctgt  
1140  
gtgggttctg tctcaaagat acaaactccc tgatagtcta tggaaggaaa atgacaacta  
1200  
ttttaagaata tttctagttt gttttttcag tgatcttttc atccaggcct tgttactgtt  
1260  
acagatcaga atgaaatgca caagtggaat gggattgacc tgtaggcctg ctctgccgag  
1320  
atgagagcag atggaatgag ttggtgacct ctcttaatct gtagcctcag ggaaacacgg  
1380  
ctaccaatg ccaagatggt aaaccctcac gcgt  
1414

<210> 4532  
 <211> 296  
 <212> PRT  
 <213> Homo sapiens

<400> 4532  
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 1 5 10 15  
 Arg Gly Leu Pro Arg Val Ser Leu Ala Asn Leu Lys Pro Asn Pro Gly  
 20 25 30  
 Ser Lys Lys Pro Glu Arg Arg Pro Arg Gly Arg Arg Arg Gly Arg Lys  
 35 40 45  
 Cys Gly Arg Gly His Lys Gly Glu Arg Gln Arg Gly Thr Arg Pro Arg  
 50 55 60  
 Leu Gly Phe Glu Gly Gly Gln Thr Pro Phe Tyr Ile Arg Ile Pro Lys  
 65 70 75 80  
 Tyr Gly Phe Asn Glu Gly His Ser Phe Arg Arg Gln Tyr Lys Pro Leu  
 85 90 95  
 Ser Leu Asn Arg Leu Gln Tyr Leu Ile Asp Leu Gly Arg Val Asp Pro  
 100 105 110  
 Ser Gln Pro Ile Asp Leu Thr Gln Leu Val Asn Gly Arg Gly Val Thr  
 115 120 125  
 Ile Gln Pro Leu Lys Arg Asp Tyr Gly Val Gln Leu Val Glu Glu Gly  
 130 135 140  
 Ala Asp Thr Phe Thr Ala Lys Val Asn Ile Glu Val Gln Leu Ala Ser  
 145 150 155 160  
 Glu Leu Ala Ile Ala Ala Ile Glu Lys Asn Gly Gly Val Val Thr Thr  
 165 170 175  
 Ala Phe Tyr Asp Pro Arg Ser Leu Asp Ile Val Cys Lys Pro Val Pro  
 180 185 190  
 Phe Phe Leu Arg Gly Gln Pro Ile Pro Lys Arg Met Leu Pro Pro Glu  
 195 200 205  
 Glu Leu Val Pro Tyr Tyr Thr Asp Ala Lys Asn Arg Gly Tyr Leu Ala  
 210 215 220  
 Asp Pro Ala Lys Phe Pro Glu Ala Arg Leu Glu Leu Ala Arg Lys Tyr  
 225 230 235 240  
 Gly Tyr Ile Leu Pro Asp Ile Thr Lys Asp Glu Leu Phe Lys Met Leu  
 245 250 255  
 Cys Thr Arg Lys Asp Pro Arg Gln Ile Phe Phe Gly Leu Ala Pro Gly  
 260 265 270  
 Trp Val Val Asn Met Ala Asp Lys Lys Ile Leu Lys Pro Thr Asp Glu  
 275 280 285  
 Asn Leu Leu Lys Tyr Tyr Thr Ser  
 290 295

<210> 4533  
 <211> 968  
 <212> DNA  
 <213> Homo sapiens

<400> 4533  
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 60

tttgcacacg tgtgcccctg tccggacgcc ggggctgagg ccgatcgcgt cgggcagcgg  
 120  
 gcgcggcggc cccgcgcagc catggactgg ctcatgggga agtccaaagc caagcccaat  
 180  
 ggcaagaagc ccgctgcgga ggagaggaag gcctacctgg agcctgagca caccaaggcc  
 240  
 aggatcaccc acttccagtt caaggagctg gtggtgctgc cccgggagat cgacctcaac  
 300  
 gagtggctgg ccagcaacac aacaacattt ttccaccaca tcaacctgca gtatagcaca  
 360  
 atctcggagt tctgcacagg agagacgtgt cagacgatgg ccgtgtgcaa cacacagtac  
 420  
 tactgggtatg acgagcgggg gaagaaggtc aagtgcacgg cccacagta cgttgacttc  
 480  
 gtcatgagct ccgtgcagaa gctggtgacg gatgaggacg tgttccccac aaaatacggc  
 540  
 agagaattcc ccagctcctt tgagtccctg gtgaggaaga tctgcagaca cctgttccac  
 600  
 gtgctggcac acatctactg ggcccacttc aaggagacgc tggccctgga gctgcacgga  
 660  
 cacttgaaca cgctctacgt ccacttcac cttttgctc gggagttaa cctgctggac  
 720  
 cccaaagaga ccgccatcat ggacgacctc accgaggtgc tatgcagcgg ggccggcggg  
 780  
 gtccacagtg ggggcagtgg ggatggggcc ggcagcgggg gcccgggagc acagaaccac  
 840  
 gtgaaggaga gatgagcccc ccgggccgga caggggcaca cgtgtgcaa gagacggtgg  
 900  
 tgtgtgttct ctctgcac cgcgtgtgca cacatgtgct gggccctctc agacctcacc  
 960  
 acacgcgt  
 968

&lt;210&gt; 4534

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4534

Thr	Arg	Ala	Gln	His	Met	Cys	Ala	His	Ala	Asp	Ala	Gly	Glu	Asn	Thr
1				5					10					15	
His	His	Arg	Leu	Phe	Ala	His	Val	Cys	Pro	Cys	Pro	Asp	Ala	Gly	Ala
			20					25					30		
Glu	Ala	Asp	Arg	Val	Gly	Gln	Arg	Ala	Arg	Arg	Pro	Arg	Ala	Ala	Met
			35				40					45			
Asp	Trp	Leu	Met	Gly	Lys	Ser	Lys	Ala	Lys	Pro	Asn	Gly	Lys	Lys	Pro
	50				55					60					
Ala	Ala	Glu	Glu	Arg	Lys	Ala	Tyr	Leu	Glu	Pro	Glu	His	Thr	Lys	Ala
65				70					75					80	
Arg	Ile	Thr	Asp	Phe	Gln	Phe	Lys	Glu	Leu	Val	Val	Leu	Pro	Arg	Glu
			85					90						95	
Ile	Asp	Leu	Asn	Glu	Trp	Leu	Ala	Ser	Asn	Thr	Thr	Thr	Phe	Phe	His
			100				105						110		
His	Ile	Asn	Leu	Gln	Tyr	Ser	Thr	Ile	Ser	Glu	Phe	Cys	Thr	Gly	Glu

```

      115      120      125
Thr Cys Gln Thr Met Ala Val Cys Asn Thr Gln Tyr Tyr Trp Tyr Asp
      130      135      140
Glu Arg Gly Lys Lys Val Lys Cys Thr Ala Pro Gln Tyr Val Asp Phe
145      150      155      160
Val Met Ser Ser Val Gln Lys Leu Val Thr Asp Glu Asp Val Phe Pro
      165      170      175
Thr Lys Tyr Gly Arg Glu Phe Pro Ser Ser Phe Glu Ser Leu Val Arg
      180      185      190
Lys Ile Cys Arg His Leu Phe His Val Leu Ala His Ile Tyr Trp Ala
      195      200      205
His Phe Lys Glu Thr Leu Ala Leu Glu Leu His Gly His Leu Asn Thr
      210      215      220
Leu Tyr Val His Phe Ile Leu Phe Ala Arg Glu Phe Asn Leu Leu Asp
225      230      235      240
Pro Lys Glu Thr Ala Ile Met Asp Asp Leu Thr Glu Val Leu Cys Ser
      245      250      255
Gly Ala Gly Gly Val His Ser Gly Gly Ser Gly Asp Gly Ala Gly Ser
      260      265      270
Gly Gly Pro Gly Ala Gln Asn His Val Lys Glu Arg
      275      280

```

<210> 4535  
 <211> 473  
 <212> DNA  
 <213> Homo sapiens

```

<400> 4535
cgactttttt tttttttttt ttttgagatg gagtctcggt ctgtcaccca ggctggagtg
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cagtggcatg atcacagctc actgcaacct ctgcctccca ggttcaagca gttctctnngc
120
ctcagcctcc cgagtagctg ggattacagg cgtccgccac cagccccggc taatttttgt
180
atttttagta gaaacggggt ttcaccatct cggccagggt ggtcttgaac tcctgacctc
240
atgatccatc cgccttggcc tcccaaagtg ctgggattac aggcattgagc taccgcgccc
300
ggccttgggt gcagattaac gggaataacct cccttggggt tcctagggtga cactgtgata
360
ttcggtatga cctcccttgc tctattcctt ggaagaagta caggcactgg tcaagagtgc
420
ccgggaccca cattgcctgg ttttgaatcc cagcacctcc acatgttacg cgt
473

```

<210> 4536  
 <211> 75  
 <212> PRT  
 <213> Homo sapiens

```

<400> 4536
Arg Leu Phe Phe Phe Phe Phe Phe Glu Met Glu Ser Arg Ser Val Thr
1      5      10      15
Gln Ala Gly Val Gln Trp His Asp His Ser Ser Leu Gln Pro Leu Pro

```

	20		25		30										
Pro	Arg	Phe	Lys	Gln	Phe	Ser	Xaa	Leu	Ser	Leu	Pro	Ser	Ser	Trp	Asp
	35		40		45										
Tyr	Arg	Arg	Pro	Pro	Pro	Arg	Pro	Ala	Asn	Phe	Cys	Ile	Phe	Ser	Arg
	50		55		60										
Asn	Gly	Val	Ser	Pro	Ser	Arg	Pro	Gly	Trp	Ser					
65			70		75										

&lt;210&gt; 4537

&lt;211&gt; 2811

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4537

```

naagcttggc acgagggaaa tgaagcctgt gatttggact ccacagtgtc tgctcttgcc
60
ctggcttttt acctagcaaa gacaactgag gctgaggaag tctttgtgcc agttttaaat
120
ataaaacgtt ctgaactacc tctgcgaggt gacattgtct tctttcttca gaaggttcat
180
attccagaga gtatcttgat ttttcgggat gagattgacc tccatgcatt ataccaggct
240
ggccaactca cctcatcct tgctgacat catatcttat ccaaaagtga cacagcccta
300
gaggagngca gtagcagagg tgctagacca tcgacccatc gagccgaaac actgcctcc
360
ctgnnccatg tttcagttga gctggtgggg tcctgtgcta ccctggtgac cgagagaatc
420
ctgcaggggg caccagagat cttggacagg caaactgcag cccttctgca tggaaccatc
480
atcctggact gtgtcaacat ggaccttaaa attggaaagg caaccccaaa ggacagcaaa
540
tatgtggaga aactagaggc ctttttccca gacctacca agagaaatga tatatttgat
600
tccctacaaa aggcaaagtt tgatgtatca ggactgacca ctgagcagat gctgagaaaa
660
gaccagaaga ctatctatag acaaggcgtc aaggtggcca ttagtgcaat atatatggat
720
ttggaggcct ttctgcagag gtctaacctc cttgcagatc tccatgcttt ctgccaggct
780
cacagctatg atgtcctggt tgccatgact atctttttca acactcaca tgagccagtg
840
cggcagttgg ctattttctg tccccatgtg gcactccaaa caacgatctg tgaagtctg
900
gaacgtccc actctccacc cctgaagctg acccctgcct caagtacca ccctaacctc
960
catgcctatc ttcaaggcaa caccaggtc tctcgaaaga aacttctgcc cctgctccag
1020
gaagccctgt cagcatatct tgactccatg aagatccctt caggacagcc tgagacagca
1080
gatgtgtcca gggagcaagt ggacaaggaa ttggacaggg caagtaactc cctgatttct
1140
ggactgagtc aagatgagga ggacctccg ctgccccga cgcccatgaa cagcttggtg
1200

```

gatgagtgcc ctctagatca ggggctgcct aaactctctg ctgaggccgt cttcgagaag  
1260  
tgcagtcaga tctcactgtc acagtctacc acagcctccc tgtccaagaa gtgactgttg  
1320  
agaggcgagg aggtagtggg tgaggctacc tgactcactt caaatgcatg ttttgagatg  
1380  
tttgagatt cagcaattct gtcttcattg ctccaggatc tggataactg ttctcataaa  
1440  
actgagagga gaaaaaaagt gaaagaaagc agctgcttta agaatggttt tccacctttt  
1500  
ccccctaact tctaccaatc agacacattt tattatttaa atctgcacct ctctctattt  
1560  
tatttgccag gggcacgatg tgacatatct gcagtcccag cacagtggga caaaaagaat  
1620  
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1680  
tgaacattca tcgatggctt ccatgtattc atttattcac ttgttcattc aagtatttat  
1740  
tgaatacctg cctcaagcta gagagaaaag agagtgcgct ttggaaattt attccagttt  
1800  
tcagcctaca gcagattatc agctcgggtga cttttctttc tgccaccatt taggtgatgg  
1860  
tgtttgatcc agagatggct gaatttctat tcttagctta ttgtgactgt ttcagatcta  
1920  
gtttgggaac agattagagg ccattgtctt ctgtcctgat cagggtggcct ggctgtttct  
1980  
ttggatccct ctgtcccaga gccaccaga accctgactc ttgagaatca agaaaacacc  
2040  
cagaaaggcc ttaatgacct cataggcact cttccaaaaa gacaacagaa ctggaatgag  
2100  
aggcctgggt ctgtctctct ccttagcagg cctatcaatt tcttgtcaat ctcttttttt  
2160  
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2220  
caagacactt cactactcca ggtctcactt tccccatctg taaaacaggg tttggactag  
2280  
gtgttccctg gtattctgtg atctgcctct tgctgccatt ctttctctcc tctgcttctc  
2340  
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2400  
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2460  
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2520  
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2580  
caacagtttc actgaacagt ggggtatgtg atgggttttg catgacatct tcagtatgag  
2640  
ggggacagtt tgacttcact ttgaggggtg gatgtctgta gctatgtgga aggtaaaaat  
2700  
agtgggtgta tcatgaacca aaggaattta tgttttgtaa cttgggtact ttattttgca  
2760  
ttttgttata ctattaaata attttttctt gttaaaaaaa aaaaaaaaaa a  
2811



<210> 4538  
 <211> 437  
 <212> PRT  
 <213> Homo sapiens

<400> 4538

```

Xaa Ala Trp His Glu Gly Asn Glu Ala Cys Asp Leu Asp Ser Thr Val
 1           5           10           15
Ser Ala Leu Ala Leu Ala Phe Tyr Leu Ala Lys Thr Thr Glu Ala Glu
      20           25           30
Glu Val Phe Val Pro Val Leu Asn Ile Lys Arg Ser Glu Leu Pro Leu
      35           40           45
Arg Gly Asp Ile Val Phe Phe Leu Gln Lys Val His Ile Pro Glu Ser
      50           55           60
Ile Leu Ile Phe Arg Asp Glu Ile Asp Leu His Ala Leu Tyr Gln Ala
65           70           75           80
Gly Gln Leu Thr Leu Ile Leu Val Asp His His Ile Leu Ser Lys Ser
      85           90           95
Asp Thr Ala Leu Glu Glu Xaa Ser Ser Arg Gly Ala Arg Pro Ser Thr
      100          105          110
His Arg Ala Glu Thr Leu Pro Ser Leu Xaa His Val Ser Val Glu Leu
      115          120          125
Val Gly Ser Cys Ala Thr Leu Val Thr Glu Arg Ile Leu Gln Gly Ala
      130          135          140
Pro Glu Ile Leu Asp Arg Gln Thr Ala Ala Leu Leu His Gly Thr Ile
      145          150          155          160
Ile Leu Asp Cys Val Asn Met Asp Leu Lys Ile Gly Lys Ala Thr Pro
      165          170          175
Lys Asp Ser Lys Tyr Val Glu Lys Leu Glu Ala Leu Phe Pro Asp Leu
      180          185          190
Pro Lys Arg Asn Asp Ile Phe Asp Ser Leu Gln Lys Ala Lys Phe Asp
      195          200          205
Val Ser Gly Leu Thr Thr Glu Gln Met Leu Arg Lys Asp Gln Lys Thr
      210          215          220
Ile Tyr Arg Gln Gly Val Lys Val Ala Ile Ser Ala Ile Tyr Met Asp
      225          230          235          240
Leu Glu Ala Phe Leu Gln Arg Ser Asn Leu Leu Ala Asp Leu His Ala
      245          250          255
Phe Cys Gln Ala His Ser Tyr Asp Val Leu Val Ala Met Thr Ile Phe
      260          265          270
Phe Asn Thr His Asn Glu Pro Val Arg Gln Leu Ala Ile Phe Cys Pro
      275          280          285
His Val Ala Leu Gln Thr Thr Ile Cys Glu Val Leu Glu Arg Ser His
      290          295          300
Ser Pro Pro Leu Lys Leu Thr Pro Ala Ser Ser Thr His Pro Asn Leu
      305          310          315          320
His Ala Tyr Leu Gln Gly Asn Thr Gln Val Ser Arg Lys Lys Leu Leu
      325          330          335
Pro Leu Leu Gln Glu Ala Leu Ser Ala Tyr Phe Asp Ser Met Lys Ile
      340          345          350
Pro Ser Gly Gln Pro Glu Thr Ala Asp Val Ser Arg Glu Gln Val Asp
      355          360          365
Lys Glu Leu Asp Arg Ala Ser Asn Ser Leu Ile Ser Gly Leu Ser Gln

```

```

      370              375              380
Asp Glu Glu Asp Pro Pro Leu Pro Pro Thr Pro Met Asn Ser Leu Val
385              390              395              400
Asp Glu Cys Pro Leu Asp Gln Gly Leu Pro Lys Leu Ser Ala Glu Ala
      405              410              415
Val Phe Glu Lys Cys Ser Gln Ile Ser Leu Ser Gln Ser Thr Thr Ala
      420              425              430
Ser Leu Ser Lys Lys
      435

```

<210> 4539  
 <211> 331  
 <212> DNA  
 <213> Homo sapiens

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<400> 4539
gtgcacggag gaaagtctca tgagcagcct gaatgggggc tctgttcctt ctgagctgga
60
tgggctggac tccgagaaag accagaagcc tgggggaaaa ccaaagggtg atcaatgaac
120
tcacctggaa actccagcaa gagcagagggc aggtggagga gctgaggatg cagcttcaga
180
agcagaaaag gaataactgt tcagagaaga agccgctgcc tttcctggct gcctccatca
240
agcaagaaga ggctgtctcc agctgtcctt ttgcatccca agtacctgtg aaaagacaaa
300
gcagcagctc aaagtgtcac ccaccggctt g
331

```

<210> 4540  
 <211> 99  
 <212> PRT  
 <213> Homo sapiens

```

<400> 4540
Met Gly Ala Leu Phe Leu Leu Ser Trp Met Gly Trp Thr Pro Arg Lys
1              5              10              15
Thr Arg Ser Leu Gly Glu Asn Gln Arg Val Ile Asn Glu Leu Thr Trp
      20              25              30
Lys Leu Gln Gln Glu Gln Arg Gln Val Glu Glu Leu Arg Met Gln Leu
      35              40              45
Gln Lys Gln Lys Arg Asn Asn Cys Ser Glu Lys Lys Pro Leu Pro Phe
      50              55              60
Leu Ala Ala Ser Ile Lys Gln Glu Glu Ala Val Ser Ser Cys Pro Phe
65              70              75              80
Ala Ser Gln Val Pro Val Lys Arg Gln Ser Ser Ser Ser Lys Cys His
      85              90              95
Pro Pro Ala

```

<210> 4541  
 <211> 452  
 <212> DNA  
 <213> Homo sapiens

```
<400> 4541
actagtcacc tcttctatca gatgatcatc tggatcatat tcttttagat taataatggc
60
cacaggcaga tccaggggatg taactgcttc agcaagaact gttgccaatc ccttcgctgt
120
tccagtctga gaaccataaa aaatcttcac tccagacaca aagatgtctt tctcttgaag
180
ggagacataa ccatttgtca tcaaactctg agctgctttt ggaacagatt tttcctgtaa
240
gttcttgccc tgcgtcttga tgacaatctg gacacaaatc caaaggctaa tgctaacagc
300
aaagcccaaa taaatgtaaa acctgtttat ccacaatgat attaaagggtg agaagaggtc
360
ccatgtatcc gcagaggggat ccatcctcct cagagccgac aggagactag gatctcggac
420
ctggagagcc cgatgattcg cactgggtact gc
452
```

```
<210> 4542
<211> 128
<212> PRT
<213> Homo sapiens
```

<400> 4542															
Met	Asp	Pro	Ser	Ala	Asp	Thr	Trp	Asp	Leu	Phe	Ser	Pro	Leu	Ile	Ser
1				5					10					15	
Leu	Trp	Ile	Asn	Arg	Phe	Tyr	Ile	Tyr	Leu	Gly	Phe	Ala	Val	Ser	Ile
			20					25					30		
Ser	Leu	Trp	Ile	Cys	Val	Gln	Ile	Val	Ile	Lys	Thr	Gln	Gly	Lys	Asn
		35					40					45			
Leu	Gln	Glu	Lys	Ser	Val	Pro	Lys	Ala	Ala	Gln	Asp	Leu	Met	Thr	Asn
	50					55					60				
Gly	Tyr	Val	Ser	Leu	Gln	Glu	Lys	Asp	Ile	Phe	Val	Ser	Gly	Val	Lys
65					70					75					80
Ile	Phe	Tyr	Gly	Ser	Gln	Thr	Gly	Thr	Ala	Lys	Gly	Phe	Ala	Thr	Val
				85					90					95	
Leu	Ala	Glu	Ala	Val	Thr	Ser	Leu	Asp	Leu	Pro	Val	Ala	Ile	Ile	Asn
			100					105					110		
Leu	Lys	Glu	Tyr	Asp	Pro	Asp	Asp	His	Leu	Ile	Glu	Glu	Val	Thr	Ser
		115					120					125			

```
<210> 4543
<211> 815
<212> DNA
<213> Homo sapiens
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```
<400> 4543
cggccgccga ggactggcct gactcggaca tttcatcctg tggacactaa ggccaaacac
60
agggaggagg gagagcgagt cactgcaggt ccctggcctg cggtccgcc gtggctgctt
120
gaggccccgc gcaccaatgc tttgcacttt gcctcgcccg acacctgcg ggccagagct
180
```

```
<210> 4545
<211> 3568
<212> DNA
<213> Homo sapiens
```

&lt;400&gt; 4545

nntgtacaag ctttagtagg tggttatatt ggtggacttg tccccaaatt aaagtatgat  
 60  
 tcaaagagtc agtcagaaga acaggaagag cctgctaaaa ctgacaggc tgtcagcaaa  
 120  
 gacagaaatg cagaggagaa aaagcgttta tctcttcagc gagaaaagat tatcgcaagg  
 180  
 gtgagtattg ataacaggac ccgggcatta gttcaggcat taagaagaac aactgaccca  
 240  
 aagctctgca ttactagggt tgaagaactg acttttcatc ttctagaatt tctgaagga  
 300  
 aaaggagtgg ctgtcaagga aagaattatt ccatatttat tacgactgag acaaattaag  
 360  
 gatgaaactc ttcaggctgc agttagagaa attttgccc taattggcta tgtggatcca  
 420  
 gtgaaagga gaggaatccg aattctctca attgatgggt gaggaacaag gggcgtgggt  
 480  
 gctctccaga ccctacgaaa attagttgaa cttactcaga agccagttca tcagctcttt  
 540  
 gattacatctt gtggtgtaag cacagggtgc atattagctt tcatgttggg gttgtttcat  
 600  
 atgcccttgg atgaatgtga ggaactttat cgaaaattag gatcagatgt attttcacaa  
 660  
 aatgtcattg ttggaacagt aaaaatgagt tggagccatg cattttatga cagtcaaaca  
 720  
 tgggaaaaca ttcttaagga taggatggga tctgcactga tgattgaaac agcaagaaac  
 780  
 cccacatgac ctaaggtagc tgctgtaagt accatagtaa atagagggat aacacccaaa  
 840  
 gcttttgtgt tcagaaacta tggtcatttt cctggaatca actctcatta tttgggaggc  
 900  
 tgtcagtata aaatgtggca ggccattaga gcctcatctg ctgctccagg ctactttgca  
 960  
 gaatatgcat tgggaaatga tcttcatcaa gatggagggt tgcttctgaa taacccttcg  
 1020  
 gcattagcta tgcattgagt taaatgtctt tggccagatg tgccgttaga gtgcatagta  
 1080  
 tccctgggca ctggacgtta tgagagtgat gtgagaaaca cggtaacata cacaagcttg  
 1140  
 aaaactaaac tttctaattg tatcaacagt gctacagata cagaagaagt ccatataatg  
 1200  
 cttgatggcc tgttacctcc tgacacctat tttagattca atcctgtaat gtgtgaaaac  
 1260  
 atacctctag atgaaagtcg aaatgaaaag ctggatcagc tgcagttgga agggttgaaa  
 1320  
 tacatagaaa gaaatgaaca aaaaatgaaa aaagttgcaa aaatattaag tcaagaaaaa  
 1380  
 acaactctgc agaaaattaa tgattggata aaattaaaaa ctgatattga tgaaggactt  
 1440  
 ccattctttt caaaattgtg atgagtatat gcttatgttc tcataaatga aggtctgttt  
 1500  
 agaagatcaa ccacattcaa taaggaattg tgggggtcga catgagttaa ctttgaaata  
 1560

cgatatgaatt ctggagaatc ctgaaaaaga cgggtgcttca accagcttgc atagcacaga  
1620  
gaatattctt ggttacagaa ttcatatggg aactaggctt ttaagatggt aataattagc  
1680  
taagcttttag taacccttac tgtgctagta gatttttagta gatattgggtg ttatattggt  
1740  
tgatgtttga aaatatatta atatatgtgc cgaacaagaa accgaaagct atattgtact  
1800  
gtgtattttt acttttagtcc tcataatcat gttgaattta tgtgatcatt gattttattt  
1860  
catatggaaa agctaatttc ttcttaaatt tacattacct aatattctca ctagctatgt  
1920  
tctccaatcc acactgcctt ttattgtaat atcatctaaa tagatgcaga aaaatggaat  
1980  
tttctctatt aaagtatttt acatttgaca taaaaaagaa ccagatacag ttttctattc  
2040  
agatatgttt attttaacat tgtttgggtta aaaaagggtga agttccagtc aaccactttt  
2100  
taccctgaa atttcaagat aatgctatat taacttttcc agatctaacc ctagcttacc  
2160  
cttccctggt ataaaatggt ttgaacttac tgaggagata ttcccatcat taacaaaaat  
2220  
aaactattta aataaaaaag gatagagggt caacatattt agtcattatg gaagtgcгаа  
2280  
tcaaagtcatt atgccacttc acaccaacca catttgtcaa aataaaaaaa aaaaaacagg  
2340  
aaataggaat tgttgataag aatgtggagg tattggaacc cctgtacatt gctggtgaga  
2400  
atgtaaaatg gtgggtgctac cacagaaaac acattggctc tttgttaaaa tgtaaacata  
2460  
aaatttcctt acaagtcagt atgagtactt cttaattgta tacctgagat aactgaaaac  
2520  
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2580  
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2640  
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2700  
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2760  
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2880  
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2940  
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ttctctaata aagtagattt tcagcaacaa agggcccatt agaatggaag catactctga  
3060  
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3120  
aagaaattat attcaggcat attaagcatt gagtgtcatt attattgatg tataatggat  
3180

tcccatccaa cattatggtg tgattttaaa agaagagcca ggaaatcaaa agtattttct  
 3240  
 ctggggctta atctttgatc agatcattga aaaacttatg gcttccagat ttgtggggga  
 3300  
 cagatacttt tactcattat ccaatgctct aaggccaccc agagagactg gattatctac  
 3360  
 attgactatt cacatttcct tagatatatt tatttgaatg atggcttcta caaagtagag  
 3420  
 aagtctgtca ttatgagaga taaagccagc tgggcttctg ggttgggtgg ggtcttggag  
 3480  
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 3540  
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 3568

<210> 4546

<211> 380

<212> PRT

<213> Homo sapiens

<400> 4546

Glu	Arg	Ile	Ile	Pro	Tyr	Leu	Leu	Arg	Leu	Arg	Gln	Ile	Lys	Asp	Glu
1				5					10					15	
Thr	Leu	Gln	Ala	Ala	Val	Arg	Glu	Ile	Leu	Ala	Leu	Ile	Gly	Tyr	Val
			20					25					30		
Asp	Pro	Val	Lys	Gly	Arg	Gly	Ile	Arg	Ile	Leu	Ser	Ile	Asp	Gly	Gly
		35					40					45			
Gly	Thr	Arg	Gly	Val	Val	Ala	Leu	Gln	Thr	Leu	Arg	Lys	Leu	Val	Glu
	50					55					60				
Leu	Thr	Gln	Lys	Pro	Val	His	Gln	Leu	Phe	Asp	Tyr	Ile	Cys	Gly	Val
65					70					75				80	
Ser	Thr	Gly	Ala	Ile	Leu	Ala	Phe	Met	Leu	Gly	Leu	Phe	His	Met	Pro
			85					90						95	
Leu	Asp	Glu	Cys	Glu	Glu	Leu	Tyr	Arg	Lys	Leu	Gly	Ser	Asp	Val	Phe
		100						105					110		
Ser	Gln	Asn	Val	Ile	Val	Gly	Thr	Val	Lys	Met	Ser	Trp	Ser	His	Ala
		115					120					125			
Phe	Tyr	Asp	Ser	Gln	Thr	Trp	Glu	Asn	Ile	Leu	Lys	Asp	Arg	Met	Gly
	130					135					140				
Ser	Ala	Leu	Met	Ile	Glu	Thr	Ala	Arg	Asn	Pro	Thr	Cys	Pro	Lys	Val
145					150					155				160	
Ala	Ala	Val	Ser	Thr	Ile	Val	Asn	Arg	Gly	Ile	Thr	Pro	Lys	Ala	Phe
			165						170					175	
Val	Phe	Arg	Asn	Tyr	Gly	His	Phe	Pro	Gly	Ile	Asn	Ser	His	Tyr	Leu
		180						185					190		
Gly	Gly	Cys	Gln	Tyr	Lys	Met	Trp	Gln	Ala	Ile	Arg	Ala	Ser	Ser	Ala
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&lt;211&gt; 515

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4548

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<212> PRT

<213> Homo sapiens

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&lt;400&gt; 4551

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361

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2640  
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2700  
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<210> 4554

<211> 705

<212> PRT

<213> Homo sapiens

<400> 4554

Met Pro Leu Arg Ile His Val Leu Leu Gly Leu Ala Ile Thr Thr Leu  
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 Val Gln Ala Val Asp Lys Lys Val Asp Cys Pro Arg Leu Cys Thr Cys  
 20 25 30  
 Glu Ile Arg Pro Trp Phe Thr Pro Arg Ser Ile Tyr Met Glu Ala Ser  
 35 40 45  
 Thr Val Asp Cys Asn Asp Leu Gly Leu Leu Thr Phe Pro Ala Arg Leu  
 50 55 60  
 Pro Ala Asn Thr Gln Ile Leu Leu Leu Gln Thr Asn Asn Ile Ala Lys  
 65 70 75 80  
 Ile Glu Tyr Ser Thr Asp Phe Pro Val Asn Leu Thr Gly Leu Asp Leu  
 85 90 95  
 Ser Gln Asn Asn Leu Ser Ser Val Thr Asn Ile Asn Val Lys Lys Met  
 100 105 110  
 Pro Gln Leu Leu Ser Val Tyr Leu Glu Glu Asn Lys Leu Thr Glu Leu  
 115 120 125  
 Pro Glu Lys Cys Leu Ser Glu Leu Ser Asn Leu Gln Glu Leu Tyr Ile  
 130 135 140  
 Asn His Asn Leu Leu Ser Thr Ile Ser Pro Gly Ala Phe Ile Gly Leu  
 145 150 155 160  
 His Asn Leu Leu Arg Leu His Leu Asn Ser Asn Arg Leu Gln Met Ile  
 165 170 175  
 Asn Ser Lys Trp Phe Asp Ala Leu Pro Asn Leu Glu Ile Leu Met Ile  
 180 185 190  
 Gly Glu Asn Pro Ile Ile Arg Ile Lys Asp Met Asn Phe Lys Pro Leu  
 195 200 205  
 Ile Asn Leu Arg Ser Leu Val Ile Ala Gly Ile Asn Leu Thr Glu Ile  
 210 215 220  
 Pro Asp Asn Ala Leu Val Gly Leu Glu Asn Leu Glu Ser Ile Ser Phe  
 225 230 235 240  
 Tyr Asp Asn Arg Leu Ile Lys Val Pro His Val Ala Leu Gln Lys Val  
 245 250 255  
 Val Asn Leu Lys Phe Leu Asp Leu Asn Lys Asn Pro Ile Asn Arg Ile  
 260 265 270  
 Arg Arg Gly Asp Phe Ser Asn Met Leu His Leu Lys Glu Leu Gly Ile  
 275 280 285  
 Asn Asn Met Pro Glu Leu Ile Ser Ile Asp Ser Leu Ala Val Asp Asn  
 290 295 300  
 Leu Pro Asp Leu Arg Lys Ile Glu Ala Thr Asn Asn Pro Arg Leu Ser  
 305 310 315 320  
 Tyr Ile His Pro Asn Ala Phe Phe Arg Leu Pro Lys Leu Glu Ser Leu  
 325 330 335  
 Met Leu Asn Ser Asn Ala Leu Ser Ala Leu Tyr His Gly Thr Ile Glu

340 345 350  
 Ser Leu Pro Asn Leu Lys Glu Ile Ser Ile His Ser Asn Pro Ile Arg  
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 Cys Asp Cys Val Ile Arg Trp Met Asn Met Asn Lys Thr Asn Ile Arg  
 370 375 380  
 Phe Met Glu Pro Asp Ser Leu Phe Cys Val Asp Pro Pro Glu Phe Gln  
 385 390 395 400  
 Gly Gln Asn Val Arg Gln Val His Phe Arg Asp Met Met Glu Ile Cys  
 405 410 415  
 Leu Pro Leu Ile Ala Pro Glu Ser Phe Pro Ser Asn Leu Asn Val Glu  
 420 425 430  
 Ala Gly Ser Tyr Val Ser Phe His Cys Arg Ala Thr Ala Glu Pro Gln  
 435 440 445  
 Pro Glu Ile Tyr Trp Ile Thr Pro Ser Gly Gln Lys Leu Leu Pro Asn  
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 Thr Leu Thr Asp Lys Phe Tyr Val His Ser Glu Gly Thr Leu Asp Ile  
 465 470 475 480  
 Asn Gly Val Thr Pro Lys Glu Gly Gly Leu Tyr Thr Cys Ile Ala Thr  
 485 490 495  
 Asn Leu Val Gly Ala Asp Leu Lys Ser Val Met Ile Lys Val Asp Gly  
 500 505 510  
 Ser Phe Pro Gln Asp Asn Asn Gly Ser Leu Asn Ile Lys Ile Arg Asp  
 515 520 525  
 Ile Gln Ala Asn Ser Val Leu Val Ser Trp Lys Ala Ser Ser Lys Ile  
 530 535 540  
 Leu Lys Ser Ser Val Lys Trp Thr Ala Phe Val Lys Thr Glu Asn Ser  
 545 550 555 560  
 His Ala Ala Gln Ser Ala Arg Ile Pro Ser Asp Val Lys Val Tyr Asn  
 565 570 575  
 Leu Thr His Leu Asn Pro Ser Thr Glu Tyr Lys Ile Cys Ile Asp Ile  
 580 585 590  
 Pro Thr Ile Tyr Gln Lys Asn Arg Lys Lys Cys Val Asn Val Thr Thr  
 595 600 605  
 Lys Gly Leu His Pro Asp Gln Lys Glu Tyr Glu Lys Asn Asn Thr Thr  
 610 615 620  
 Thr Leu Met Ala Cys Leu Gly Gly Leu Leu Gly Ile Ile Gly Val Ile  
 625 630 635 640  
 Cys Leu Ile Ser Cys Leu Ser Pro Glu Met Asn Cys Asp Gly Gly His  
 645 650 655  
 Ser Tyr Val Arg Asn Tyr Leu Gln Lys Pro Thr Phe Ala Leu Gly Glu  
 660 665 670  
 Leu Tyr Pro Pro Leu Ile Asn Leu Trp Glu Ala Gly Lys Glu Lys Ser  
 675 680 685  
 Thr Ser Leu Lys Val Lys Ala Thr Val Ile Gly Leu Pro Thr Asn Met  
 690 695 700  
 Ser  
 705

&lt;210&gt; 4555

&lt;211&gt; 1128

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4555

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 tggcccacct ggggtgggagg ctgccaccgc ggccatgatca tgccctctgt gcccacacag  
 180  
 gtctctgagc ggcccctgat gttcctggtg gacactcctg gcgtgctggc tcctcggatt  
 240  
 gaaagtgtgg agacaggcct gaagctggcc ctgtgtggaa cgggtgctgga ccacctggtc  
 300  
 ggggaggaga ccatggctga ctacctgctg tacaccctca acaaacacca gcgctttggg  
 360  
 tgagtgcagc actacggcct gggcagtgcc tgtgacaacg tagagcgcgt gctgaagagt  
 420  
 gtggctgtga agctggggaa gacgcagaag gtgaagggtgc tcacgggcac gggtaacgtg  
 480  
 aacgttatcc agcctaacta tcctgcggca gcccgtagct tcctgcagac tttccgccgt  
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 gggctgctgg gttccgtgat gctggacctc gacgtcctgc ggggccaccc cccggctgag  
 600  
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 720  
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 1128

&lt;210&gt; 4556

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4556

Met	Pro	Ser	Val	Pro	Thr	Gln	Val	Ser	Glu	Arg	Pro	Leu	Met	Phe	Leu
1				5				10				15			
Leu	Asp	Thr	Pro	Gly	Val	Leu	Ala	Pro	Arg	Ile	Glu	Ser	Val	Glu	Thr
			20					25				30			
Gly	Leu	Lys	Leu	Ala	Leu	Cys	Gly	Thr	Val	Leu	Asp	His	Leu	Val	Gly
		35				40					45				
Glu	Glu	Thr	Met	Ala	Asp	Tyr	Leu	Leu	Tyr	Thr	Leu	Asn	Lys	His	Gln
	50					55					60				
Arg	Phe	Gly													

65

&lt;210&gt; 4557

&lt;211&gt; 446

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4557

nnacgcgtgc acagaaagcg gtgccaggac tctcttggtc ctctcggag ggctgggatg

60

gcctgtccct ctctctcct caccctgct ccagcaagg ccgtccgttg tgccaagac

120

catctaggac attctcatcc cctgagacc tcaaggcct tctgcctcc tcctcagac

180

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240

aaaaaacctc ctgtaccat ctctcacttg agacctctgc taggcctgcc tcctccatct

300

gacctccaca tcccatcagc agccaccctg ggccccctgca tgcactggcc tcctccctca

360

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420

gaccaccaca tcacatctac acgcgt

446

&lt;210&gt; 4558

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4558

Xaa Arg Val His Arg Lys Arg Cys Gln Asp Ser Leu Gly Ser Pro Arg

1

10

15

Arg Ala Gly Met Ala Cys Pro Ser Pro Leu Leu Thr Pro Ala Pro Ser

20

25

30

Lys Ala Val Arg Cys Ala Gln Asp His Leu Gly His Ser His Pro Pro

35

40

45

Glu Thr Ser Arg Ala Phe Leu Pro Pro Pro Ser Asp Val Arg Val Arg

50

55

60

Ser Cys Leu Tyr His Trp Ser Ala Thr Ala His Leu Pro Pro Leu Ser

65

70

75

80

Lys Lys Pro Pro Cys Thr Ile Ser His Leu Arg Pro Leu Leu Gly Leu

85

90

95

Pro Pro Pro Ser Asp Leu His Ile Pro Ser Ala Ala Thr Leu Gly Pro

100

105

110

Cys Met His Trp Pro Pro Pro Ser Asp Ala Pro Cys Thr Ile Ser Leu

115

120

125

Ala Leu Asp Ala Leu Leu Gly Leu Pro Pro Pro Ser Asp His His Ile

130

135

140

Thr Ser Thr Arg

145

&lt;210&gt; 4559

&lt;211&gt; 919

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4559

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919

```

&lt;210&gt; 4560

&lt;211&gt; 126

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4560

```

Met Gln Gln Thr Asn Val Ala Leu Leu Gly Arg Glu Thr Val Gly Lys
1           5           10           15
Lys Glu Pro Thr Gly Phe Ser Leu Asn Asn Pro Met Tyr Val Arg Ser
20           25           30
Pro Cys Asp Pro Asp Arg Asp Gln Arg Tyr Leu Thr Thr Tyr Asn Gln
35           40           45
Gly Tyr Phe Glu Asn Ile Pro Lys Gly Leu Asp Gln Glu Gly Trp Thr
50           55           60
Arg Gly Gly Ile Gln Pro Gln Met Pro Gly Gly Tyr Ala Leu Ser Gln
65           70           75           80
Pro Val Ser Cys Met Glu Ala Thr Pro Asn Pro Met Glu Ser Leu Arg

```

[illegible]

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2820  
aacacccctt acatatcttc tgcttcttcc tatactgggc agtctcagct gtacgcagca  
2880



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 4172

&lt;210&gt; 4562

&lt;211&gt; 1182

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4562

Met Lys Leu Lys Glu Val Asp Arg Thr Ala Met Gln Ala Trp Ser Pro  
 1 5 10 15  
 Ala Gln Asn His Pro Ile Tyr Leu Ala Thr Gly Thr Ser Ala Gln Gln

20 25 30  
 Leu Asp Ala Thr Phe Ser Thr Asn Ala Ser Leu Glu Ile Phe Glu Leu  
 35 40 45  
 Asp Leu Ser Asp Pro Ser Leu Asp Met Lys Ser Cys Ala Thr Phe Ser  
 50 55 60  
 Ser Ser His Arg Tyr His Lys Leu Ile Trp Gly Pro Tyr Lys Met Asp  
 65 70 75 80  
 Ser Lys Gly Asp Val Ser Gly Val Leu Ile Ala Gly Gly Glu Asn Gly  
 85 90 95  
 Asn Ile Ile Leu Tyr Asp Pro Ser Lys Ile Ile Ala Gly Asp Lys Glu  
 100 105 110  
 Val Val Ile Ala Gln Asn Asp Lys His Thr Gly Pro Val Arg Ala Leu  
 115 120 125  
 Asp Val Asn Ile Phe Gln Thr Asn Leu Val Ala Ser Gly Ala Asn Glu  
 130 135 140  
 Ser Glu Ile Tyr Ile Trp Asp Leu Asn Asn Phe Ala Thr Pro Met Thr  
 145 150 155 160  
 Pro Gly Ala Lys Thr Gln Pro Pro Glu Asp Ile Ser Cys Ile Ala Trp  
 165 170 175  
 Asn Arg Gln Val Gln His Ile Leu Ala Ser Ala Ser Pro Ser Gly Arg  
 180 185 190  
 Ala Thr Val Trp Asp Leu Arg Glu Asn Glu Pro Ile Ile Lys Val Ser  
 195 200 205  
 Asp His Ser Asn Arg Met His Cys Ser Gly Leu Ala Trp His Pro Asp  
 210 215 220  
 Val Ala Thr Gln Met Val Leu Ala Ser Glu Asp Asp Arg Leu Pro Val  
 225 230 235 240  
 Ile Gln Met Trp Asp Leu Arg Phe Ala Ser Ser Pro Leu Arg Val Leu  
 245 250 255  
 Glu Asn His Ala Arg Gly Ile Leu Ala Ile Ala Trp Ser Met Ala Asp  
 260 265 270  
 Pro Glu Leu Leu Leu Ser Cys Gly Lys Asp Ala Lys Ile Leu Cys Ser  
 275 280 285  
 Asn Pro Asn Thr Gly Glu Val Leu Tyr Glu Leu Pro Thr Asn Thr Gln  
 290 295 300  
 Trp Cys Phe Asp Ile Gln Trp Cys Pro Arg Asn Pro Ala Val Leu Ser  
 305 310 315 320  
 Ala Ala Ser Phe Asp Gly Arg Ile Ser Val Tyr Ser Ile Met Gly Gly  
 325 330 335  
 Ser Thr Asp Gly Leu Arg Gln Lys Gln Val Asp Lys Leu Ser Ser Ser  
 340 345 350  
 Phe Gly Asn Leu Asp Pro Phe Gly Thr Gly Gln Pro Leu Pro Pro Leu  
 355 360 365  
 Gln Ile Pro Gln Gln Thr Ala Gln His Ser Ile Val Leu Pro Leu Lys  
 370 375 380  
 Lys Pro Pro Lys Trp Ile Arg Arg Pro Val Gly Ala Ser Phe Ser Phe  
 385 390 395 400  
 Gly Gly Lys Leu Val Thr Phe Glu Asn Val Arg Met Pro Ser His Gln  
 405 410 415  
 Gly Ala Glu Gln Gln Gln Gln His His Val Phe Ile Ser Gln Val  
 420 425 430  
 Val Thr Glu Lys Glu Phe Leu Ser Arg Ser Asp Gln Leu Gln Gln Ala  
 435 440 445  
 Val Gln Ser Gln Gly Phe Ile Asn Tyr Cys Gln Lys Lys Ile Asp Ala

450		455		460
Ser Gln Thr Glu Phe Glu Lys Asn Val Trp Ser Phe Leu Lys Val Asn				
465	470	475	480	
Phe Glu Asp Asp Ser Arg Gly Lys Tyr Leu Glu Leu Gly Tyr Arg				
	485	490	495	
Lys Glu Asp Leu Glu Lys Xaa Gln Asp Ile Lys Glu Glu Lys Glu Glu				
	500	505	510	
Ser Glu Phe Leu Pro Ser Ser Gly Gly Thr Phe Asn Ile Ser Val Ser				
	515	520	525	
Gly Asp Ile Asp Gly Leu Ile Thr Gln Ala Leu Leu Thr Gly Asn Phe				
	530	535	540	
Glu Ser Ala Val Asp Leu Cys Leu His Asp Asn Arg Met Ala Asp Ala				
545	550	555	560	
Ile Ile Leu Ala Ile Ala Gly Gly Gln Glu Leu Leu Ala Arg Thr Gln				
	565	570	575	
Lys Lys Tyr Phe Ala Lys Ser Gln Ser Lys Ile Thr Arg Leu Ile Thr				
	580	585	590	
Ala Val Val Met Lys Asn Trp Lys Glu Ile Val Glu Ser Cys Asp Leu				
	595	600	605	
Lys Asn Trp Arg Glu Ala Leu Ala Ala Val Leu Thr Tyr Ala Lys Pro				
	610	615	620	
Asp Glu Phe Ser Ala Leu Cys Asp Leu Leu Gly Thr Arg Leu Glu Asn				
625	630	635	640	
Glu Gly Asp Ser Leu Leu Gln Thr Gln Ala Cys Leu Cys Tyr Ile Cys				
	645	650	655	
Ala Gly Asn Val Glu Lys Leu Val Ala Cys Trp Thr Lys Ala Gln Asp				
	660	665	670	
Gly Ser His Pro Leu Ser Leu Gln Asp Leu Ile Glu Lys Val Val Ile				
	675	680	685	
Leu Arg Lys Ala Val Gln Leu Thr Gln Ala Met Asp Thr Ser Thr Val				
	690	695	700	
Gly Val Leu Leu Ala Ala Lys Met Ser Gln Tyr Ala Asn Leu Leu Ala				
705	710	715	720	
Ala Gln Gly Ser Ile Ala Ala Ala Leu Ala Phe Leu Pro Asp Asn Thr				
	725	730	735	
Asn Gln Pro Asn Ile Met Gln Leu Arg Asp Arg Leu Cys Arg Ala Gln				
	740	745	750	
Gly Glu Pro Val Ala Gly His Glu Ser Pro Lys Ile Pro Tyr Glu Lys				
	755	760	765	
Gln Gln Leu Pro Lys Gly Arg Pro Gly Pro Val Ala Gly His His Gln				
	770	775	780	
Met Pro Arg Val Gln Thr Gln Gln Tyr Tyr Pro His Gly Glu Asn Pro				
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Pro Pro Pro Gly Phe Ile Met His Gly Asn Val Asn Pro Asn Ala Ala				
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&lt;210&gt; 4563

&lt;211&gt; 2037

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4563

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<211> 354

<212> PRT

<213> Homo sapiens

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Phe	Lys	Glu	Leu	Leu	Arg	Arg	Leu	Lys	Val	Gln	Asp	Gln	Met	Thr	Lys
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&lt;210&gt; 4566

&lt;211&gt; 247

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4566

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			20					25					30		
Glu	Ile	Leu	Arg	Leu	Arg	Gln	Ser	Glu	Arg	Met	Ser	Gln	Asp	Asp	Phe
			35				40					45			
Gln	Ser	Pro	Pro	Ile	Val	Glu	Leu	Arg	Glu	Lys	Ile	Gln	Pro	Glu	Ile
			50				55				60				
Leu	Glu	Leu	Ile	Lys	Gln	Gln	Arg	Leu	Asn	Arg	Leu	Cys	Glu	Gly	Ser
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Ser	Phe	Arg	Lys	Ile	Gly	Asn	Arg	Arg	Arg	Gln	Glu	Arg	Phe	Trp	Tyr



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Cys	Arg	Leu	Ala	Leu	Asn	His	Lys	Val	Leu	His	Tyr	Gly	Asp	Leu	Asp									
				100				105				110												
Asp	Asn	Pro	Gln	Gly	Glu	Val	Thr	Phe	Glu	Ser	Leu	Gln	Glu	Lys	Ile									
				115				120				125												
Pro	Val	Ala	Asp	Ile	Lys	Ala	Ile	Val	Thr	Gly	Lys	Asp	Cys	Pro	His									
				130				135				140												
Met	Lys	Glu	Lys	Ser	Ala	Leu	Lys	Gln	Asn	Lys	Glu	Val	Leu	Glu	Leu									
145				150				155				160												
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				165				170				175												
Pro	Asn	Lys	Tyr	Glu	Tyr	Cys	Ile	Trp	Ile	Asp	Gly	Leu	Ser	Ala	Leu									
				180				185				190												
Leu	Gly	Lys	Asp	Met	Ser	Ser	Glu	Leu	Thr	Lys	Ser	Asp	Leu	Asp	Thr									
				195				200				205												
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				210				215				220												
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<211> 1211

<212> DNA

<213> Homo sapiens

<400> 4567

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<210> 4568

<211> 120

<212> PRT

<213> Homo sapiens

<400> 4568

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			20					25					30		
Leu	Arg	Gly	Gln	Ser	Val	Gln	Gln	Val	Gly	Pro	Gln	Gly	Leu	Leu	Tyr
		35					40					45			
Val	Gln	Gln	Arg	Glu	Leu	Ala	Val	Thr	Ser	Pro	Lys	Asp	Gly	Ser	Ile
		50				55					60				
Ser	Ile	Leu	Gly	Ser	Asp	Asp	Ala	Thr	Thr	Cys	His	Ile	Val	Val	Leu
		65			70					75				80	
Arg	His	Thr	Gly	Asn	Gly	Ala	Thr	Cys	Leu	Thr	His	Cys	Asp	Gly	Thr
			85					90						95	
Asp	Thr	Lys	Ala	Glu	Val	Pro	Leu	Ile	Met	Asn	Ser	Ile	Lys	Ser	Phe
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Ser	Asp	His	Ala	Gln	Cys	Gly	Arg								
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<210> 4569

<211> 1797

<212> DNA

<213> Homo sapiens

<400> 4569

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1797

&lt;210&gt; 4570

<211> 141  
 <212> PRT  
 <213> Homo sapiens

<400> 4570  
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 20 25 30  
 Gln Thr Trp His Ile Arg Phe Gly Asp Asn Gly Leu Gly Thr Leu Met  
 35 40 45  
 Leu Leu Gly Pro Gly Glu Thr Val Leu Arg Gln Lys Leu Gly Val Gln  
 50 55 60  
 Gly Gly Pro Arg Val Arg His Cys Gly Glu Gly Asn Ala Gly Glu Ser  
 65 70 75 80  
 Gly Pro Thr Leu Gln Leu Gly Thr Arg Gly Arg Lys Gln Arg Gly Gln  
 85 90 95  
 Ala Ser Val Pro Leu Pro Gln Glu Gln Thr Ser Gly Pro Gln Glu Gly  
 100 105 110  
 Leu Gln Ala Ala Arg Ser Leu Pro Ser Ala Gly Gly Ser Arg Gly Arg  
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 Lys Gly Trp Arg Ala Ala Gly Arg Gln Pro Ser Thr Arg  
 130 135 140

<210> 4571  
 <211> 1084  
 <212> DNA  
 <213> Homo sapiens

<400> 4571  
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 300  
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 360  
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 420  
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 480  
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 720

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 1084

<210> 4572

<211> 126

<212> PRT

<213> Homo sapiens

<400> 4572

Lys	Ser	Pro	Ser	Arg	Ala	Asn	Arg	Pro	Pro	Glu	Lys	Lys	Ala	Gln	Gly
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Lys	Thr	Gln	Gln	Asn	Arg	Lys	Leu	Thr	Asp	Phe	Tyr	Pro	Val	Arg	Arg
		20					25						30		
Ser	Ser	Arg	Lys	Ser	Lys	Ala	Glu	Leu	Gln	Ser	Glu	Glu	Arg	Lys	Arg
		35					40					45			
Ile	Asp	Glu	Leu	Ile	Glu	Ser	Gly	Lys	Glu	Glu	Gly	Met	Lys	Ile	Asp
	50				55						60				
Leu	Ile	Asp	Gly	Lys	Gly	Arg	Gly	Val	Ile	Ala	Thr	Lys	Gln	Phe	Ser
65					70					75				80	
Arg	Gly	Asp	Phe	Val	Val	Glu	Tyr	His	Gly	Asp	Leu	Ile	Glu	Ile	Thr
			85					90					95		
Asp	Ala	Lys	Lys	Arg	Glu	Ala	Leu	Tyr	Ala	Gln	Asp	Pro	Ser	Thr	Gly
		100					105						110		
Cys	Tyr	Met	Tyr	Tyr	Phe	Gln	Tyr	Leu	Ser	Lys	Thr	Tyr	Trp		
		115					120						125		

<210> 4573

<211> 309

<212> DNA

<213> Homo sapiens

<400> 4573

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 120  
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 180  
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ttcacgcgt  
309

<210> 4574  
<211> 103  
<212> PRT  
<213> Homo sapiens

<400> 4574  
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20 25 30  
Met Arg Gly Pro Pro Gly Pro Gln Gly Pro Pro Gly Ser Pro Gly Arg  
35 40 45  
Ala Gly Ala Val Gly Thr Pro Gly Lys Arg Gly Pro Ser Gly Pro Gln  
50 55 60  
Gly Leu Leu Gly Pro Pro Gly Pro Pro Ala Pro Val Gly Pro Pro His  
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Glu Thr Asn Pro Phe Thr Arg  
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<210> 4575  
<211> 1068  
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<213> Homo sapiens

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gatgatacag tccaccagct tcaggctgct ctgcattctt ttcagcccct tggccatgtg  
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<210> 4576

<211> 107

<212> PRT

<213> Homo sapiens

<400> 4576

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			20					25					30		
Pro	Ala	Arg	His	Val	Ala	Thr	Ala	Gln	Gly	Glu	Val	Leu	Pro	Pro	Gly
		35					40					45			
Gly	Leu	Gly	Gly	Ala	Ala	Gln	Arg	Ala	Arg	Gly	Gln	Ser	His	Gly	Gly
	50					55					60				
Thr	Val	Pro	Gly	Asn	Ala	Pro	Ala	Ala	Asp	Leu	Leu	Ala	Leu	Ser	Pro
65					70					75				80	
Arg	Leu	Glu	Arg	Ser	Gly	Thr	Ile	Ser	Thr	His	Cys	Lys	Leu	Arg	Leu
				85					90					95	
Pro	Gly	Ser	Arg	His	Ser	Pro	Ala	Ser	Ala	Ser					
			100						105						

<210> 4577

<211> 3525

<212> DNA

<213> Homo sapiens

<400> 4577

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 120  
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 180  
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3300  
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3525

&lt;210&gt; 4578

&lt;211&gt; 1007

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4578

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Met Ser His Phe Pro Asp Arg Gly Ser Glu Asn Gly Thr Pro Met Asp
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Val Lys Ala Gly Val Arg Val Met Gln Val Ser Pro Asp Gly Gln His
      20           25           30
Leu Ala Ser Gly Asp Arg Ser Gly Asn Leu Arg Gln Val Gly Pro Gly
      35           40           45
Ser Val Gln Cys Thr Pro Pro Ser Ser Ser Ser Gly Ser Gln Gly Ser
      50           55           60
Gly Gln Lys Pro Trp Pro Trp His Leu Leu Leu Pro Ile Gly Asn Glu
      65           70           75           80
Gly Leu Ile His Glu Leu His Phe Met Asp Glu Leu Val Lys Val Glu
      85           90           95
Ala His Asp Ala Glu Val Leu Cys Leu Glu Tyr Ser Lys Pro Glu Thr
      100          105          110
Gly Leu Thr Leu Leu Ala Ser Ala Ser Arg Asp Arg Leu Ile His Val
      115          120          125
Leu Asn Val Glu Lys Asn Tyr Asn Leu Glu Gln Thr Leu Asp Asp His
      130          135          140
Ser Ser Ser Ile Thr Ala Ile Lys Phe Ala Gly Asn Arg Asp Ile Gln
      145          150          155          160
Met Ile Ser Cys Gly Ala Asp Lys Ser Ile Tyr Phe Arg Ser Ala Gln
      165          170          175
Gln Gly Ser Asp Gly Leu His Phe Val Arg Thr His His Val Ala Glu
      180          185          190
Lys Thr Thr Leu Tyr Asp Met Asp Ile Asp Ile Thr Gln Lys Tyr Val
      195          200          205
Ala Val Ala Cys Gln Asp Arg Asn Val Arg Val Tyr Asn Thr Val Asn
      210          215          220
Gly Lys Gln Lys Lys Cys Tyr Lys Gly Ser Gln Gly Asp Glu Gly Ser
      225          230          235          240
Leu Leu Lys Val His Val Asp Pro Ser Gly Thr Phe Leu Ala Thr Ser
      245          250          255
Cys Ser Asp Lys Ser Ile Ser Val Ile Asp Phe Tyr Ser Gly Glu Cys
      260          265          270
Ile Ala Lys Met Phe Gly His Ser Gly Gly Cys Ala Ser Leu Leu Gly
      275          280          285
Met Pro Pro His Pro Pro Thr Pro Ser Asp Ser Glu Gly Lys Cys Ser
      290          295          300
Leu Ser Ala Leu Phe Ala Glu Ile Ile Thr Ser Met Lys Phe Thr Tyr
      305          310          315          320
Asp Cys His His Leu Ile Thr Val Ser Gly Asp Ser Cys Val Phe Ile
      325          330          335
Trp His Leu Gly Pro Glu Ile Thr Asn Cys Met Lys Gln His Leu Leu
      340          345          350
Glu Ile Asp His Arg Gln Gln Gln Gln His Thr Asn Asp Lys Lys Arg
      355          360          365
Ser Gly His Pro Arg Ser Trp Gln Pro Leu Pro Val His Gln Arg Asp
      370          375          380
Glu Ser Leu Pro Gly Pro His Gly Val Met Leu Gly Thr Gln Ser Ser
      385          390          395          400
Leu Pro Ala Asn Gln Arg Gln Ala Ala Thr Val Gly Lys Ala Ala Gly

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Asp Asp Asp Val Ala Asp Gly Leu Ala Phe His Ala Lys Arg Ser Tyr
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Gln Pro His Gly Arg Trp Ala Glu Arg Ala Gly Gln Glu Pro Leu Lys
      435      440      445
Thr Ile Leu Asp Ala Gln Asp Leu Asp Cys Tyr Phe Thr Pro Met Lys
      450      455      460
Pro Glu Ser Leu Glu Asn Ser Ile Leu Asp Ser Leu Glu Pro Gln Ser
465      470      475      480
Leu Ala Ser Leu Leu Ser Glu Gln Lys Glu Ser Ser Glu Ala Ser Glu
      485      490      495
Leu Ile Leu Tyr Ser Leu Glu Ala Glu Val Thr Val Thr Gly Thr Asp
      500      505      510
Ser Gln Tyr Cys Arg Lys Glu Val Glu Ala Gly Pro Gly Asp Gln Gln
      515      520      525
Gly Asp Ser Tyr Leu Arg Val Ser Ser Asp Ser Pro Lys Asp Gln Ser
      530      535      540
Pro Pro Glu Gly Pro Thr Glu Asp Glu Leu Ser Leu Pro Glu Gly Pro
545      550      555      560
Ser Val Pro Ser Ser Ser Leu Pro Gln Thr Pro Glu Gln Glu Lys Phe
      565      570      575
Leu Arg His His Phe Glu Thr Leu Thr Glu Ser Pro Cys Arg Ala Leu
      580      585      590
Gly Asp Val Glu Ala Ser Glu Ala Glu Asp His Phe Phe Asn Pro Arg
      595      600      605
Leu Ser Ile Ser Thr Gln Phe Leu Ser Ser Leu Gln Lys Ala Ser Arg
      610      615      620
Phe Thr His Thr Phe Pro Pro Arg Ala Thr Gln Cys Leu Val Lys Ser
625      630      635      640
Pro Glu Val Lys Leu Met Asp Arg Gly Gly Ser Gln Pro Arg Ala Gly
      645      650      655
Thr Gly Tyr Ala Ser Pro Asp Arg Thr His Ser Val Pro Ser Ala Ser
      660      665      670
Val Thr Ala Pro Cys Leu Thr Ser Leu Ala Ser Cys Val Pro Ala Ser
      675      680      685
Ser Val Leu Pro Thr Asp Arg Asn Leu Pro Thr Pro Thr Ser Ala Pro
      690      695      700
Thr Pro Gly Leu Ala Gln Gly Val His Ala Pro Ser Thr Cys Ser Tyr
705      710      715      720
Met Glu Ala Thr Ala Ser Ser Arg Ala Arg Ile Ser Arg Ser Ile Ser
      725      730      735
Leu Gly Asp Ser Glu Gly Pro Ile Val Ala Thr Leu Ala Gln Pro Leu
      740      745      750
Arg Arg Pro Ser Ser Val Gly Glu Leu Ala Ser Leu Gly Gln Glu Leu
      755      760      765
Gln Ala Ile Thr Thr Ala Thr Thr Pro Ser Leu Asp Ser Glu Gly Gln
      770      775      780
Glu Pro Ala Leu Arg Ser Trp Gly Asn His Glu Ala Arg Ala Asn Leu
785      790      795      800
Arg Leu Thr Leu Ser Ser Ala Cys Asp Gly Leu Leu Gln Pro Pro Val
      805      810      815
Asp Thr Gln Pro Gly Val Thr Val Pro Ala Val Ser Phe Pro Ala Pro
      820      825      830
Ser Pro Val Glu Glu Ser Ala Leu Arg Leu His Gly Ser Ala Phe Arg

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835                      840                      845  
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 Asn Pro Gln Leu Pro Glu Ala Arg Pro Gly Ile Pro Gly Gly Thr Ala  
 865                      870                      875                      880  
 Ser Leu Leu Glu Pro Thr Ser Gly Trp Gly Thr Ser Cys Thr Gly Cys  
 885                      890                      895  
 Arg Pro Pro Ser Lys Lys Pro Ser Thr Phe Thr Val Cys Trp Ser Pro  
 900                      905                      910  
 Val Ala Arg Trp Thr Pro Gly Ser Ser Arg His Gly Leu Ser Trp Ser  
 915                      920                      925  
 Pro Pro Ser Cys Gly Ser Thr Ala Ser Trp Arg Leu Asn Ala Trp Trp  
 930                      935                      940  
 Gly Leu Val Trp Pro Gln Pro Arg Leu Cys Pro Ala Gln Asp Pro Arg  
 945                      950                      955                      960  
 Pro His Arg Arg Cys Thr Pro Trp Pro Ala Gln Thr Cys Arg Pro Cys  
 965                      970                      975  
 Trp Asn Thr Thr Arg Ser Cys Trp Cys Arg Pro Cys Gly Gly Arg His  
 980                      985                      990  
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&lt;210&gt; 4579

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4579

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 120  
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 180  
 aatgacaaga agcggagtgg cccccccagg caggatacgt atgtgtccac acctagtggag  
 240  
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 321

&lt;210&gt; 4580

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4580

Xaa Lys Met Phe Gly His Ser Glu Ile Ile Thr Ser Met Lys Phe Thr  
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 Tyr Asp Cys His His Leu Ile Thr Val Ser Gly Asp Ser Cys Val Phe  
 20                      25                      30  
 Ile Trp His Leu Gly Pro Glu Ile Thr Asn Cys Met Lys Gln His Leu  
 35                      40                      45  
 Leu Glu Ile Asp His Arg Gln Gln Gln Gln His Thr Asn Asp Lys Lys

50		55		60											
Arg	Ser	Gly	Pro	Pro	Arg	Gln	Asp	Thr	Tyr	Val	Ser	Thr	Pro	Ser	Glu
65					70					75					80
Ile	His	Ser	Leu	Ser	Pro	Gly	Glu	Gln	Thr	Glu	Asp	Asp	Leu	Glu	Glu
			85						90					95	
Glu	Cys	Glu	Pro	Glu	Glu	Met	Leu	Lys	Thr	Pro					
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&lt;210&gt; 4581

&lt;211&gt; 1396

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4581

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1200

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<210> 4582

<211> 354

<212> PRT

<213> Homo sapiens

<400> 4582

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Ser	Leu	Gln	Glu	Arg	Leu	Arg	Leu	Arg	Glu	Glu	Arg	Lys	Gln	Gln	Glu
		20					25					30			
Glu	Leu	Met	Lys	Ala	Phe	Glu	Thr	Pro	Glu	Glu	Lys	Arg	Ala	Arg	Arg
		35					40					45			
Leu	Ala	Lys	Lys	Glu	Ala	Lys	Glu	Arg	Lys	Lys	Arg	Glu	Lys	Met	Gly
		50				55					60				
Trp	Gly	Glu	Glu	Tyr	Met	Gly	Tyr	Thr	Asn	Thr	Asp	Asn	Pro	Phe	Gly
65				70					75					80	
Asp	Asn	Asn	Leu	Leu	Gly	Thr	Phe	Ile	Trp	Asn	Lys	Ala	Leu	Glu	Lys
			85					90					95		
Lys	Gly	Ile	Ser	His	Leu	Glu	Glu	Lys	Glu	Leu	Lys	Glu	Arg	Asn	Lys
			100					105					110		
Arg	Ile	Gln	Glu	Asp	Asn	Arg	Leu	Glu	Leu	Gln	Lys	Val	Lys	Gln	Leu
		115					120					125			
Arg	Leu	Glu	Arg	Glu	Arg	Glu	Lys	Ala	Met	Arg	Glu	Gln	Glu	Leu	Glu
		130				135					140				
Met	Leu	Gln	Arg	Val	Lys	Gly	Thr	Glu	His	Phe	Lys	Thr	Trp	Glu	Glu
145				150						155				160	
Gln	Glu	Asp	Asn	Phe	His	Leu	Gln	Gln	Ala	Lys	Leu	Arg	Ser	Lys	Ile
			165					170					175		
Arg	Ile	Arg	Asp	Gly	Arg	Ala	Lys	Pro	Ile	Asp	Leu	Leu	Ala	Lys	Tyr
			180					185					190		
Ile	Ser	Ala	Glu	Asp	Asp	Asp	Leu	Ala	Gly	Glu	Met	His	Glu	Pro	Tyr
		195				200						205			
Thr	Phe	Leu	Asn	Gly	Leu	Thr	Val	Ala	Asp	Met	Glu	Asp	Leu	Leu	Glu
		210				215					220				
Asp	Ile	Gln	Val	Tyr	Met	Glu	Leu	Glu	Gln	Gly	Lys	Asn	Ala	Asp	Phe
225				230						235				240	
Trp	Arg	Asp	Met	Thr	Thr	Ile	Thr	Glu	Asp	Glu	Ile	Ser	Lys	Leu	Arg
			245					250					255		
Lys	Leu	Glu	Ala	Ser	Gly	Lys	Gly	Pro	Gly	Glu	Arg	Arg	Glu	Gly	Val
		260					265						270		
Asn	Ala	Ser	Val	Ser	Ser	Asp	Val	Gln	Ser	Val	Phe	Lys	Gly	Lys	Thr
		275				280						285			
Tyr	Asn	Gln	Leu	Gln	Val	Ile	Phe	Gln	Gly	Ile	Glu	Gly	Lys	Ile	Arg
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Gln	Leu	Arg	Ala	His	Met	Ala	Arg	Ala	Arg	Leu	Arg	Glu	Arg	His	Gln
				325					330					335	
Asp	Val	Leu	Arg	Gln	Lys	Leu	Tyr	Lys	Leu	Lys	Gln	Glu	Gln	Gly	Val
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Glu	Ser														

&lt;210&gt; 4583

&lt;211&gt; 3350

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4583

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120
agatgacgcc agtcagggag cggccgtggc ccagacagtg aggaagcgcg aaggcggagc
180
aaccgaggaa tcctccggag aagaatcaga gccgtcgcta ccgccactac cgccaccacc
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1200

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2820



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<210> 4584

<211> 923

<212> PRT

<213> Homo sapiens

<400> 4584

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			20					25					30		
Trp	Leu	Gly	Glu	Leu	Gln	Arg	Ser	Val	His	Ala	Trp	Glu	Ile	Ser	Asp
		35					40					45			
Gln	Leu	Leu	Gln	Ile	Arg	Gln	Asp	Val	Glu	Ser	Cys	Tyr	Phe	Ala	Ala
		50				55					60				
Gln	Thr	Met	Lys	Met	Lys	Ile	Gln	Thr	Ser	Phe	Tyr	Glu	Leu	Pro	Thr
65					70				75					80	
Asp	Ser	His	Ala	Ser	Leu	Arg	Asp	Ser	Leu	Leu	Thr	His	Ile	Gln	Asn
			85					90					95		
Leu	Lys	Asp	Leu	Ser	Pro	Val	Ile	Val	Thr	Gln	Leu	Ala	Leu	Ala	Ile
			100					105					110		
Ala	Asp	Leu	Ala	Leu	Gln	Met	Pro	Ser	Trp	Lys	Gly	Cys	Val	Gln	Thr
		115				120						125			
Leu	Val	Glu	Lys	Tyr	Ser	Asn	Asp	Val	Thr	Ser	Leu	Pro	Phe	Leu	Leu
		130				135					140				
Glu	Ile	Leu	Thr	Val	Leu	Pro	Glu	Glu	Val	His	Ser	Arg	Ser	Leu	Arg
145					150				155					160	
Ile	Gly	Ala	Asn	Arg	Arg	Thr	Glu	Ile	Ile	Glu	Asp	Leu	Ala	Phe	Tyr
			165					170					175		
Ser	Ser	Thr	Val	Val	Ser	Leu	Leu	Met	Thr	Cys	Val	Glu	Lys	Ala	Gly
			180					185					190		
Thr	Asp	Glu	Lys	Met	Leu	Met	Lys	Val	Phe	Arg	Cys	Leu	Gly	Ser	Trp
		195				200						205			
Phe	Asn	Leu	Gly	Val	Leu	Asp	Ser	Asn	Phe	Met	Ala	Asn	Asn	Lys	Leu
	210					215					220				
Leu	Ala	Leu	Leu	Phe	Glu	Val	Leu	Gln	Gln	Asp	Lys	Thr	Ser	Ser	Asn

3782

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Val Gly Lys Gly Ser Ala Ala Leu Leu Gln Pro Leu Val Thr Gln Met
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Val Asn Val Tyr His Val His Gln His Ser Cys Phe Leu Tyr Leu Gly
        690          695          700
Ser Ile Leu Val Asp Glu Tyr Gly Met Glu Glu Gly Cys Arg Gln Gly
705          710          715          720
Leu Leu Asp Met Leu Gln Ala Leu Cys Ile Pro Thr Phe Gln Leu Leu
        725          730          735
Glu Gln Gln Asn Gly Leu Gln Asn His Pro Asp Thr Val Asp Asp Leu
        740          745          750
Phe Arg Leu Ala Thr Arg Phe Ile Gln Arg Ser Pro Val Thr Leu Leu
        755          760          765
Arg Ser Gln Val Val Ile Pro Ile Leu Gln Trp Ala Ile Ala Ser Thr
        770          775          780
Thr Leu Asp His Arg Asp Ala Asn Cys Ser Val Met Arg Phe Leu Arg
785          790          795          800
Asp Leu Ile His Thr Gly Val Ala Asn Asp His Glu Glu Asp Phe Glu
        805          810          815
Leu Arg Lys Glu Leu Ile Gly Gln Val Met Asn Gln Leu Gly Gln Gln
        820          825          830
Leu Val Ser Gln Leu Leu His Thr Cys Cys Phe Cys Leu Pro Pro Tyr
        835          840          845
Thr Leu Pro Asp Val Ala Glu Val Leu Trp Glu Ile Met Gln Val Asp
        850          855          860
Arg Pro Thr Phe Cys Arg Trp Leu Glu Asn Ser Leu Lys Gly Leu Pro
865          870          875          880
Lys Glu Thr Thr Val Gly Ala Val Thr Val Thr His Lys Gln Leu Thr
        885          890          895
Asp Phe His Lys Gln Val Thr Ser Ala Glu Glu Cys Lys Gln Val Cys
        900          905          910
Trp Ala Leu Arg Asp Phe Thr Arg Leu Phe Arg
        915          920

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&lt;210&gt; 4585

&lt;211&gt; 1952

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4585

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420

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600  
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1952

&lt;210&gt; 4586

&lt;211&gt; 530

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4586

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      20           25           30
Lys Asp Val His Lys Gly Val Gly Gly Ile Ile Phe Ser Ser Ser Pro
      35           40           45
Ile Leu Asp Leu Ser Glu Ser Gly Leu Cys Arg Leu Glu Glu Val Phe
      50           55           60
Arg Ile Pro Ser Leu Gln Gln Leu His Leu Gln Arg Asn Ala Leu Cys
      65           70           75           80
Val Ile Pro Gln Asp Phe Phe Gln Leu Leu Pro Asn Leu Thr Trp Leu
      85           90           95
Asp Leu Arg Tyr Asn Arg Ile Lys Ala Leu Pro Ser Gly Ile Gly Ala
      100          105          110
His Gln His Leu Lys Thr Leu Leu Leu Glu Arg Asn Pro Ile Lys Met
      115          120          125
Leu Pro Val Glu Leu Gly Ser Val Thr Thr Leu Lys Ala Leu Asn Leu
      130          135          140
Arg His Cys Pro Leu Glu Phe Pro Pro Gln Leu Val Val Gln Lys Gly
      145          150          155          160
Leu Val Ala Ile Gln Arg Phe Leu Arg Met Trp Ala Val Glu His Ser
      165          170          175
Leu Pro Arg Asn Pro Thr Ser Gln Glu Ala Pro Pro Val Arg Glu Met
      180          185          190
Thr Leu Arg Asp Leu Pro Ser Pro Gly Leu Glu Leu Ser Gly Asp His
      195          200          205
Ala Ser Asn Gln Gly Ala Val Asn Ala Gln Asp Pro Glu Gly Ala Val
      210          215          220
Met Lys Glu Lys Ala Ser Phe Leu Pro Pro Val Glu Lys Pro Asp Leu
      225          230          235          240
Ser Glu Leu Arg Lys Ser Ala Asp Ser Ser Glu Asn Trp Pro Ser Glu
      245          250          255
Glu Glu Ile Arg Arg Phe Trp Lys Leu Arg Gln Glu Ile Val Glu His
      260          265          270
Val Lys Ala Asp Val Leu Gly Asp Gln Leu Leu Thr Arg Glu Leu Pro
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Pro Asn Leu Lys Ala Ala Leu Asn Ile Glu Lys Glu Leu Pro Lys Pro
      290          295          300
Arg His Val Phe Arg Arg Lys Thr Ala Ser Ser Arg Ser Ile Leu Pro
      305          310          315          320
Asp Leu Leu Ser Pro Tyr Gln Met Ala Ile Arg Ala Lys Arg Leu Glu
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Glu Ser Arg Ala Ala Ala Leu Arg Glu Leu Gln Glu Lys Gln Ala Leu
      340          345          350
Met Glu Gln Arg Arg Arg Glu Lys Arg Ala Leu Gln Glu Trp Arg Glu
      355          360          365
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      370          375          380
Pro Pro Arg Arg Ser Met Val Ala Ser Lys Ile Pro Ser Ala Thr Asp

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          420          425          430
Gln Glu Arg Asn Leu Glu Glu Lys Ile Lys Gln His Val Leu Gln Met
          435          440          445
Arg Glu Gln Arg Arg Phe His Gly Gln Ala Pro Leu Glu Glu Met Arg
          450          455          460
Lys Ala Ala Glu Asp Leu Glu Ile Ala Thr Glu Leu Gln Asp Glu Val
465          470          475          480
Leu Lys Leu Lys Leu Gly Leu Thr Leu Asn Lys Asp Arg Arg Ala
          485          490          495
Ala Leu Thr Gly Asn Leu Ser Leu Gly Leu Pro Ala Ala Gln Pro Gln
          500          505          510
Asn Thr Phe Phe Asn Thr Lys Tyr Gly Glu Ser Gly Asn Val Arg Arg
          515          520          525
Tyr Gln
530

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&lt;210&gt; 4587

&lt;211&gt; 1723

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4587

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 1723

&lt;210&gt; 4588

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4588

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 Ser Lys Lys Asn Gln Pro Pro Ser Lys Ala Pro Lys Leu His Ser Glu  
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 Pro Ser Lys Lys Gly Glu Thr Pro Thr Val Asp Gly Thr Trp Lys Thr  
 35 40 45  
 Pro Ser Phe Pro Lys Lys Lys Thr Ala Ala Ser Ser Asn Gly Ser Gly  
 50 55 60  
 Gln Pro Leu Asp Lys Lys Ala Ala Val Ser Trp Leu Thr Pro Ala Pro  
 65 70 75 80  
 Ser Lys Lys Ala Asp Ser Val Ala Ala Lys Val Asp Leu Leu Gly Glu  
 85 90 95  
 Phe Gln Ser Ala Leu Pro Lys Ile Asn Ser His Pro Thr Arg Ser Gln  
 100 105 110  
 Lys Lys Ser Ser Gln Lys Lys Ser Ser Lys Lys Asn His Pro Gln Lys  
 115 120 125  
 Asn Ala Pro Gln Asn Ser Thr Gln Ala His Ser Glu Asn Lys Cys Ser

130 135 140  
 Gly Ala Ser Gln Lys Leu Pro Arg Lys Met Val Ala Ile Asp Cys Glu  
 145 150 155 160  
 Met Val Gly Thr Gly Pro Lys Gly His Val Ser Ser Leu Ala Arg Cys  
 165 170 175  
 Ser Ile Val Asn Tyr Asn Gly Asp Val Leu Tyr Asp Glu Tyr Ile Leu  
 180 185 190  
 Pro Pro Cys His Ile Val Asp Tyr Arg Thr Arg Trp Ser Gly Ile Arg  
 195 200 205  
 Lys Gln His Met Val Asn Ala Thr Pro Phe Lys Ile Ala Arg Gly Gln  
 210 215 220  
 Ile Leu Lys Ile Leu Thr Gly Lys Ile Val Val Gly His Ala Ile His  
 225 230 235 240  
 Asn Asp Phe Lys Ala Leu Gln Tyr Phe His Pro Lys Ser Leu Thr Arg  
 245 250 255  
 Asp Thr Ser His Ile Pro Pro Leu Asn Arg Lys Ala Asp Cys Pro Glu  
 260 265 270  
 Asn Ala Thr Met Ser Leu Lys His Leu Thr Lys Lys Leu Leu Asn Arg  
 275 280 285  
 Asp Ile Gln Val Gly Lys Ser Gly His Ser Ser Val Glu Asp Ala Gln  
 290 295 300  
 Ala Thr Met Glu Leu Tyr Lys Leu Val Glu Val Glu Trp Glu Glu His  
 305 310 315 320  
 Leu Ala Arg Asn Pro Pro Thr Asp  
 325

&lt;210&gt; 4589

&lt;211&gt; 585

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4589

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 gatgcacacc tggttaggag tgcgggtctc agcagctccg ctggggcagg gcggtggcca  
 360  
 cacacacact ctttcccctc taagcttccg atgctcacag agggaaacctc aggggttcag  
 420  
 gccaggaatg aggtgcgggg gatcctcgct gggacgaacc tgctgctccc caacccgacg  
 480  
 ggcctgtgtg gtctcgcgag cggtgaccgt ggcgtctggt tttctgcagg cgcccgcccc  
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&lt;210&gt; 4590



<211> 121  
 <212> PRT  
 <213> Homo sapiens

<400> 4590  
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 Gly Val Arg Val Ser Ala Ala Pro Leu Gly Gln Gly Gly Gly His Thr  
 35 40 45  
 His Thr Leu Ser Pro Leu Ser Phe Arg Cys Ser Gln Arg Glu Pro Gln  
 50 55 60  
 Gly Phe Arg Pro Gly Met Arg Cys Gly Gly Ser Ser Leu Gly Arg Thr  
 65 70 75 80  
 Cys Cys Ser Pro Thr Arg Arg Ala Cys Val Val Ser Arg Ala Val Thr  
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<210> 4591  
 <211> 496  
 <212> DNA  
 <213> Homo sapiens

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 180  
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 240  
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 <211> 152  
 <212> PRT  
 <213> Homo sapiens

<400> 4592  
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 35 40 45  
 Ala Pro Leu Trp Pro Ser Gly His Asp Arg Leu His Glu Thr Arg Lys  
 50 55 60  
 Leu Arg Cys Leu Ala Asp Arg Leu Val Ser Pro His Pro Ala Ser Ser  
 65 70 75 80  
 Pro Gly Ser Arg Tyr Leu Pro Gln Asn Ser Leu His Lys Trp Pro Gln  
 85 90 95  
 Ala Cys Ala Gly Leu Trp Gly Phe Leu Pro Trp Ala Val Val Leu Gly  
 100 105 110  
 Met Cys Ser Pro Gln Ala Asp Gly Gln Leu Trp Glu Gly Trp Ser Cys  
 115 120 125  
 Arg Leu Gly Ile His Thr Pro Ala His Val Ala Ser Pro Ser Ala Val  
 130 135 140  
 Trp Ser Gln Gly Trp Ala Gly Lys  
 145 150

&lt;210&gt; 4593

&lt;211&gt; 4783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4593

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 120  
 tcaggtagct cctcttctgc taccactgtc acctccaagg tggcacccag ctggcccgag  
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 tctcactcct ctgcagattc ggcatcttta gcaaagaaga aacctctctt cattacaact  
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 420  
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<210> 4594

<211> 1145

<212> PRT

<213> Homo sapiens

<400> 4594

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Pro	Ser	Asn	Pro	Phe	Leu	Ala	Phe	Val	Glu	Lys	Val	Glu	His	Ser	Pro
			20					25					30		
Phe	Ser	Ser	Phe	Ala	Ser	Gln	Ala	Ser	Gly	Ser	Ser	Ser	Ser	Ala	Thr
			35				40						45		
Thr	Val	Thr	Ser	Lys	Val	Ala	Pro	Ser	Trp	Pro	Glu	Ser	His	Ser	Ser
	50				55					60					
Ala	Asp	Ser	Ala	Ser	Leu	Ala	Lys	Lys	Lys	Pro	Leu	Phe	Ile	Thr	Thr
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Asp	Ser	Ser	Lys	Leu	Val	Ser	Gly	Val	Leu	Gly	Ser	Ala	Leu	Thr	Ser
			85					90						95	
Gly	Gly	Pro	Ser	Leu	Ser	Ala	Met	Gly	Asn	Gly	Arg	Ser	Ser	Ser	Pro
		100						105					110		
Thr	Ser	Ser	Leu	Thr	Gln	Pro	Ile	Glu	Met	Pro	Thr	Leu	Ser	Ser	Ser
		115				120						125			
Pro	Thr	Glu	Glu	Arg	Pro	Thr	Val	Gly	Pro	Gly	Gln	Gln	Asp	Asn	Pro
	130					135					140				
Leu	Leu	Lys	Thr	Phe	Ser	Asn	Val	Phe	Gly	Arg	His	Ser	Gly	Gly	Phe
145					150				155					160	
Leu	Ser	Ser	Pro	Ala	Asp	Phe	Ser	Gln	Glu	Asn	Lys	Ala	Pro	Phe	Glu
			165					170						175	
Ala	Val	Lys	Arg	Phe	Ser	Leu	Asp	Glu	Arg	Ser	Leu	Ala	Cys	Arg	Gln

3794

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Gly Ser Leu Arg Ser Val Leu Asn Lys Glu Ser His Ser Pro Phe Gly		
625	630	635
Leu Asp Ser Phe Asn Ser Thr Ala Lys Val Ser Pro Leu Thr Pro Lys		640
	645	650
Leu Phe Asn Ser Leu Leu Leu Gly Pro Thr Ala Ser Asn Asn Lys Thr		655
	660	665
Glu Gly Ser Ser Leu Arg Asp Leu Leu His Ser Gly Pro Gly Lys Leu		670
	675	680
Pro Gln Thr Pro Leu Asp Thr Gly Ile Pro Phe Pro Pro Val Phe Ser		685
	690	695
Thr Ser Ser Ala Gly Val Lys Ser Lys Ala Ser Leu Pro Asn Phe Leu		700
705	710	715
Asp His Ile Ile Ala Ser Val Val Glu Asn Lys Lys Thr Ser Asp Ala		720
	725	730
Ser Lys Arg Ala Cys Asn Leu Thr Asp Thr Gln Lys Glu Val Lys Glu		735
	740	745
Met Val Met Gly Leu Asn Val Leu Asp Pro His Thr Ser His Ser Trp		750
	755	760
Leu Cys Asp Gly Arg Leu Leu Cys Leu His Asp Pro Ser Asn Lys Asn		765
	770	775
Asn Trp Lys Ile Phe Arg Glu Cys Trp Lys Gln Gly Gln Pro Val Leu		780
785	790	795
Val Ser Gly Val His Lys Lys Leu Lys Ser Glu Leu Trp Lys Pro Glu		800
	805	810
Ala Phe Ser Gln Glu Phe Gly Asp Gln Asp Val Asp Leu Val Asn Cys		815
	820	825
Arg Asn Cys Ala Ile Ile Ser Asp Val Lys Val Arg Asp Phe Trp Asp		830
	835	840
Gly Phe Glu Ile Ile Cys Lys Arg Leu Arg Ser Glu Asp Gly Gln Pro		845
	850	855
Met Val Leu Lys Leu Lys Asp Trp Pro Pro Gly Glu Asp Phe Arg Asp		860
865	870	875
Met Met Pro Thr Arg Phe Glu Asp Leu Met Glu Asn Leu Pro Leu Pro		880
	885	890
Glu Tyr Thr Lys Arg Asp Gly Arg Leu Asn Leu Ala Ser Arg Leu Pro		895
	900	905
Ser Tyr Phe Val Arg Pro Asp Leu Gly Pro Lys Met Tyr Asn Ala Tyr		910
	915	920
Gly Leu Ile Thr Ala Glu Asp Arg Arg Val Gly Thr Thr Asn Leu His		925
	930	935
Leu Asp Val Ser Asp Ala Val Asn Val Met Val Tyr Val Gly Ile Pro		940
945	950	955
Ile Gly Glu Gly Ala His Asp Glu Glu Val Leu Lys Thr Ile Asp Glu		960
	965	970
Gly Asp Ala Asp Glu Val Thr Lys Gln Arg Ile His Asp Gly Lys Glu		975
	980	985
Lys Pro Gly Ala Leu Trp His Ile Tyr Ala Ala Lys Asp Ala Glu Lys		990
	995	1000
Ile Arg Glu Leu Leu Arg Lys Val Gly Glu Glu Gln Gly Gln Glu Asn		1005
	1010	1015
Pro Pro Asp His Asp Pro Ile His Asp Gln Ser Trp Tyr Leu Asp Gln		1020
1025	1030	1035
Thr Leu Arg Lys Arg Leu Tyr Glu Glu Tyr Gly Val Gln Gly Trp Ala		1040

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 1060 1065 1070  
 His Gln Val His Asn Leu Tyr Ser Cys Ile Lys Val Ala Glu Asp Phe  
 1075 1080 1085  
 Val Ser Pro Glu His Val Lys His Cys Phe Arg Leu Thr Gln Glu Phe  
 1090 1095 1100  
 Arg His Leu Ser Asn Thr His Thr Asn His Glu Asp Lys Leu Gln Val  
 1105 1110 1115 1120  
 Lys Asn Ile Ile Tyr His Ala Val Lys Asp Ala Val Gly Thr Leu Lys  
 1125 1130 1135  
 Ala His Glu Ser Lys Leu Ala Arg Ser  
 1140 1145

&lt;210&gt; 4595

&lt;211&gt; 935

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4595

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&lt;210&gt; 4596



<211> 169  
 <212> PRT  
 <213> Homo sapiens

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<210> 4597  
 <211> 515  
 <212> DNA  
 <213> Homo sapiens

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<210> 4598

<211> 135  
 <212> PRT  
 <213> Homo sapiens

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 Val Tyr Ser Ser Ala Ser Phe Ser Glu His Leu Asp Gly Gly Cys Ser  
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 <212> DNA  
 <213> Homo sapiens

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 <211> 228  
 <212> PRT  
 <213> Homo sapiens

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 Phe Arg Met Glu Ser Gly Ile Glu Pro Ser Val Asp Leu Glu Thr Leu  
 50 55 60  
 Asp Glu Arg Ile Lys Ile Arg Glu Met Ile Leu Lys Gly Gln Ile Gln  
 65 70 75 80  
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 Asn Arg Tyr Leu Tyr Phe His Leu Gln Gln Gln His Leu Ile Glu Leu  
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 Ile Arg Gln Arg Glu Thr Glu Ala Ala Leu Glu Phe Ala Gln Thr Gln  
 115 120 125  
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 Arg Thr Leu Ala Leu Leu Ala Phe Asp Ser Pro Glu Glu Ser Pro Phe  
 145 150 155 160  
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 Asn Gln Ala Val Leu Asp Tyr Glu Asn Arg Glu Ser Thr Pro Lys Leu  
 180 185 190  
 Ala Lys Leu Leu Lys Leu Leu Leu Trp Ala Gln Asn Glu Leu Asp Gln  
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 Glu Glu Pro Lys  
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<210> 4601  
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 <213> Homo sapiens

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 916

&lt;210&gt; 4602

&lt;211&gt; 305

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4602

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Ala	Val	Arg	Ser	Tyr	Tyr	Glu	Val	Phe	Leu	Lys	Ser	Asp	Arg	Val	Ala
		35				40						45			
Arg	Met	Val	Gln	Ser	Gly	Gly	Cys	Ser	Ala	Asn	Asp	Phe	Arg	Glu	Val
	50				55					60					
Phe	Lys	Lys	Asn	Ile	Glu	Lys	Arg	Val	Arg	Ser	Leu	Pro	Glu	Ile	Asp
65			70							75				80	
Gly	Leu	Ser	Lys	Glu	Thr	Val	Leu	Ser	Ser	Trp	Ile	Ala	Lys	Tyr	Asp
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Ala	Ile	Tyr	Arg	Gly	Glu	Glu	Asp	Leu	Cys	Lys	Gln	Pro	Asn	Arg	Met
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Ala	Leu	Ser	Ala	Val	Ser	Glu	Leu	Ile	Leu	Ser	Lys	Glu	Gln	Leu	Tyr
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Glu	Met	Phe	Gln	Gln	Ile	Leu	Gly	Ile	Lys	Lys	Leu	Glu	His	Gln	Leu
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Leu	Tyr	Asn	Ala	Cys	Gln	Leu	Asp	Asn	Ala	Asp	Glu	Gln	Ala	Ala	Gln
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Ile	Arg	Arg	Glu	Leu	Asp	Gly	Arg	Leu	Gln	Leu	Ala	Asp	Lys	Met	Ala
		165						170					175		
Lys	Glu	Arg	Lys	Phe	Pro	Lys	Phe	Ile	Ala	Lys	Asp	Met	Glu	Asn	Met
		180					185						190		
Tyr	Ile	Glu	Glu	Leu	Arg	Ser	Ser	Val	Asn	Leu	Leu	Met	Ala	Asn	Leu

195 200 205  
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 Leu Lys Arg Ser Gln Asn Ser Ala Phe Leu Asp Ile Gly Asp Glu Asn  
 225 230 235 240  
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 Ile Val Tyr Cys Thr Met Glu Val Glu Gly Glu Lys Leu Gln Thr Asp  
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 Pro  
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&lt;210&gt; 4603

&lt;211&gt; 2090

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4603

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 2090

&lt;210&gt; 4604

&lt;211&gt; 666

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4604

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Ser	Ile	Leu	Asp	Ser	Leu	Glu	Pro	Gln	Ser	Leu	Ala	Ser	Leu	Leu	Ser
		35						40					45		
Glu	Ser	Glu	Ser	Pro	Gln	Glu	Ala	Gly	Arg	Gly	His	Pro	Ser	Phe	Leu
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Pro	Gln	Gln	Lys	Glu	Ser	Ser	Glu	Ala	Ser	Glu	Leu	Ile	Leu	Tyr	Ser

[illegible]



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530	535	540
Leu Ser Gly Trp Gly Thr Ser Cys Thr Gly Cys Arg Pro Pro Ser Lys		
545	550	555
Lys Pro Ser Thr Phe Thr Val Cys Trp Ser Pro Val Ala Arg Trp Thr		
565	570	575
Pro Gly Ser Ser Arg His Gly Leu Ser Trp Ser Pro Pro Ser Cys Gly		
580	585	590
Ser Thr Ala Ser Trp Arg Leu Asn Ala Trp Trp Gly Leu Val Trp Pro		
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Gln Pro Arg Leu Cys Pro Ala Gln Asp Pro Arg Pro His Arg Arg Cys		
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Thr Pro Trp Pro Ala Gln Thr Cys Arg Pro Cys Trp Asn Thr Thr Arg		
625	630	635
Ser Cys Trp Cys Arg Pro Cys Gly Gly Arg His Gly Gly Thr Glu Gly		
645	650	655
Ala Ala Pro Pro Gln Pro Cys Cys Phe		
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&lt;210&gt; 4605

&lt;211&gt; 2998

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4605

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<210> 4606

<211> 584

<212> PRT

<213> Homo sapiens

<400> 4606

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Leu	Lys	Val	Asp	Cys	Val	Ala	Thr	Gly	Leu	Pro	Asn	Pro	Glu	Ile
			20					25					30	Ser
Trp	Ser	Leu	Pro	Asp	Gly	Ser	Leu	Val	Asn	Ser	Phe	Met	Gln	Ser
			35					40					45	Asp
Asp	Ser	Gly	Gly	Arg	Thr	Lys	Arg	Tyr	Val	Val	Phe	Asn	Asn	Gly
			50					55					60	Thr
Leu	Tyr	Phe	Asn	Glu	Val	Gly	Met	Arg	Glu	Glu	Gly	Asp	Tyr	Thr
65										75				80
Phe	Ala	Glu	Asn	Gln	Val	Gly	Lys	Asp	Glu	Met	Arg	Val	Arg	Val
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Val	Val	Thr	Ala	Pro	Ala	Thr	Ile	Arg	Asn	Lys	Thr	Cys	Leu	Ala
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Gln	Val	Pro	Tyr	Gly	Asp	Val	Val	Thr	Val	Ala	Cys	Glu	Ala	Lys
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Glu	Pro	Met	Pro	Lys	Val	Thr	Trp	Leu	Ser	Pro	Thr	Asn	Lys	Val
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Pro	Thr	Ser	Ser	Glu	Lys	Tyr	Gln	Ile	Tyr	Gln	Asp	Gly	Thr	Leu
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Ile	Gln	Lys	Ala	Gln	Arg	Ser	Asp	Ser	Gly	Asn	Tyr	Thr	Cys	Leu
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Arg	Asn	Ser	Ala	Gly	Glu	Asp	Arg	Lys	Thr	Val	Trp	Ile	His	Val
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Val	Gln	Pro	Pro	Lys	Ile	Asn	Gly	Asn	Pro	Asn	Pro	Ile	Thr	Thr
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Arg	Glu	Ile	Ala	Ala	Gly	Gly	Ser	Arg	Lys	Leu	Ile	Asp	Cys	Lys
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210 215 220  
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 245 250 255  
 Gly Ser Leu Asp Ile Arg Ser Leu Arg Lys Ser Asp Ser Val Gln Leu  
 260 265 270  
 Val Cys Met Ala Arg Asn Glu Gly Gly Glu Ala Arg Leu Ile Leu Gln  
 275 280 285  
 Leu Thr Val Leu Glu Pro Met Glu Lys Pro Ile Phe His Asp Pro Ile  
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 Ser Glu Lys Ile Thr Ala Met Ala Gly His Thr Ile Ser Leu Asn Cys  
 305 310 315 320  
 Ser Ala Ala Gly Thr Pro Thr Pro Ser Leu Val Trp Val Leu Pro Asn  
 325 330 335  
 Gly Thr Asp Leu Gln Ser Gly Gln Gln Leu Gln Arg Phe Tyr His Lys  
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 Ala Asp Gly Met Leu His Ile Ser Gly Leu Ser Ser Val Asp Ala Gly  
 355 360 365  
 Ala Tyr Arg Cys Val Ala Arg Asn Ala Ala Gly His Thr Glu Arg Leu  
 370 375 380  
 Val Ser Leu Lys Val Gly Leu Lys Pro Glu Ala Asn Lys Gln Tyr His  
 385 390 395 400  
 Asn Leu Val Ser Ile Ile Asn Gly Glu Thr Leu Lys Leu Pro Cys Thr  
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 Pro Pro Gly Ala Gly Gln Gly Arg Phe Ser Trp Thr Leu Pro Asn Gly  
 420 425 430  
 Met His Leu Glu Gly Pro Gln Thr Leu Gly Arg Val Ser Leu Leu Asp  
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 Asn Gly Thr Leu Thr Val Arg Glu Ala Ser Val Phe Asp Arg Gly Thr  
 450 455 460  
 Tyr Val Cys Arg Met Glu Thr Glu Tyr Gly Pro Ser Val Thr Ser Ile  
 465 470 475 480  
 Pro Val Ile Val Ile Ala Tyr Pro Pro Arg Ile Thr Ser Glu Pro Thr  
 485 490 495  
 Pro Val Ile Tyr Thr Arg Pro Gly Asn Thr Val Lys Leu Asn Cys Met  
 500 505 510  
 Ala Met Gly Ile Pro Lys Ala Asp Ile Thr Trp Glu Leu Pro Asp Lys  
 515 520 525  
 Ser His Leu Lys Ala Gly Val Gln Ala Arg Leu Tyr Gly Asn Arg Phe  
 530 535 540  
 Leu His Pro Gln Gly Ser Leu Thr Ile Gln His Ala Thr Gln Arg Asp  
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&lt;210&gt; 4607

&lt;211&gt; 456

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4607

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 300  
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 360  
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<210> 4608

<211> 107

<212> PRT

<213> Homo sapiens

<400> 4608

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Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu	Gly	Pro	Gly	Arg
			20					25					30		
Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu	Cys	Pro	Asn	Val	Lys
		35					40					45			
Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val	Glu	Ile	Glu	Pro	Gly	Val
	50					55				60					
Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile	Gly	Glu	Gly	Glu	Pro	His	Val
65					70				75					80	
Asp	Gly	Xaa	Pro	Gly	Asp	Leu	Arg	Phe	Arg	Ile	Lys	Val	Val	Lys	His
				85				90						95	
Pro	Ile	Phe	Glu	Arg	Arg	Gly	Asp	Asp	Leu	Tyr					
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<210> 4609

<211> 904

<212> DNA

<213> Homo sapiens

<400> 4609

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 780  
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<210> 4610

<211> 250

<212> PRT

<213> Homo sapiens

<400> 4610

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Pro	Gln	Pro	Pro	Gly	Ala	Ala	Arg	Trp	Ala	Glu	Val	Met	Ala	Arg	Phe
			20					25						30	
Ala	Ala	Arg	Leu	Gly	Ala	Gln	Gly	Arg	Arg	Val	Val	Leu	Val	Thr	Ser
		35					40						45		
Gly	Gly	Thr	Lys	Val	Pro	Leu	Glu	Ala	Arg	Pro	Val	Arg	Phe	Leu	Asp
	50					55					60				
Asn	Phe	Ser	Ser	Gly	Arg	Arg	Gly	Ala	Thr	Ser	Ala	Glu	Ala	Phe	Leu
65					70					75				80	
Ala	Ala	Gly	Tyr	Gly	Val	Leu	Phe	Leu	Tyr	Arg	Ala	Arg	Ser	Ala	Phe
				85					90					95	
Pro	Tyr	Ala	His	Arg	Phe	Pro	Pro	Gln	Thr	Trp	Leu	Ser	Ala	Leu	Arg
			100					105					110		
Pro	Ser	Gly	Pro	Ala	Leu	Ser	Gly	Leu	Leu	Ser	Leu	Glu	Ala	Glu	Glu
		115					120					125			
Asn	Ala	Leu	Pro	Gly	Phe	Ala	Glu	Ala	Leu	Arg	Ser	Tyr	Gln	Glu	Ala
	130					135					140				
Ala	Ala	Ala	Gly	Thr	Phe	Leu	Ala	Val	Glu	Phe	Thr	Thr	Leu	Ala	Asp
145				150						155				160	
Tyr	Leu	His	Leu	Leu	Gln	Ala	Ala	Ala	Gln	Ala	Leu	Asn	Pro	Leu	Gly
			165					170						175	
Pro	Ser	Ala	Met	Phe	Tyr	Leu	Ala	Ala	Ala	Val	Ser	Asp	Phe	Tyr	Val
			180					185					190		
Pro	Val	Ser	Glu	Met	Pro	Glu	His	Lys	Ile	Gln	Ser	Ser	Gly	Gly	Pro

195	200	205
Leu Gln Gly Lys Val Gln Leu Glu Asp Ile Leu His His Leu Glu Lys		
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	245	250

<210> 4611  
 <211> 1946  
 <212> DNA  
 <213> Homo sapiens

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 1200

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 1740  
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 1860  
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 1920  
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 1946

&lt;210&gt; 4612

&lt;211&gt; 532

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4612

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Lys	Pro	Ala	Pro	Ser	Ser	Gln	Arg	Lys	Pro	Pro	Ala	Arg	Pro	Ser	Ala
			20					25					30		
Ala	Ala	Ala	Ala	Ile	Ala	Val	Ala	Ala	Ala	Glu	Glu	Glu	Arg	Arg	Leu
			35				40						45		
Arg	Gln	Arg	Asn	Arg	Leu	Arg	Leu	Glu	Glu	Asp	Lys	Pro	Ala	Val	Glu
			50			55					60				
Arg	Cys	Leu	Glu	Glu	Leu	Val	Phe	Gly	Asp	Val	Glu	Asn	Asp	Glu	Asp
65					70				75					80	
Ala	Leu	Leu	Arg	Arg	Leu	Arg	Gly	Pro	Arg	Val	Gln	Glu	His	Glu	Asp
			85					90						95	
Ser	Gly	Asp	Ser	Glu	Val	Glu	Asn	Glu	Ala	Lys	Gly	Asn	Phe	Pro	Pro
			100					105					110		
Gln	Lys	Lys	Pro	Val	Trp	Val	Asp	Glu	Glu	Asp	Glu	Asp	Glu	Glu	Met
			115				120					125			
Val	Asp	Met	Met	Asn	Asn	Arg	Phe	Arg	Lys	Asp	Met	Met	Lys	Asn	Ala
			130			135					140				
Ser	Glu	Ser	Lys	Leu	Ser	Lys	Asp	Asn	Leu	Lys	Lys	Arg	Leu	Lys	Glu
145					150					155				160	
Glu	Phe	Gln	His	Ala	Met	Gly	Gly	Val	Pro	Ala	Trp	Ala	Glu	Thr	Thr



165										170					175				
Lys	Arg	Lys	Thr	Ser	Ser	Asp	Asp	Glu	Ser	Glu	Glu	Asp	Glu	Asp	Asp				
			180					185					190						
Leu	Leu	Gln	Arg	Thr	Gly	Asn	Phe	Ile	Ser	Thr	Ser	Thr	Ser	Leu	Pro				
		195					200						205						
Arg	Gly	Ile	Leu	Lys	Met	Lys	Asn	Cys	Gln	His	Ala	Asn	Ala	Glu	Arg				
	210					215					220								
Pro	Thr	Val	Ala	Arg	Ile	Ser	Ser	Val	Gln	Phe	His	Pro	Gly	Ala	Gln				
225					230					235					240				
Ile	Val	Met	Val	Ala	Gly	Leu	Asp	Asn	Ala	Val	Ser	Leu	Phe	Gln	Val				
				245					250					255					
Asp	Gly	Lys	Thr	Asn	Pro	Lys	Ile	Gln	Ser	Ile	Tyr	Leu	Glu	Arg	Phe				
		260						265					270						
Pro	Ile	Phe	Lys	Ala	Cys	Phe	Ser	Ala	Asn	Gly	Glu	Glu	Val	Leu	Ala				
	275					280						285							
Thr	Ser	Thr	His	Ser	Lys	Val	Leu	Tyr	Val	Tyr	Asp	Met	Leu	Ala	Gly				
	290					295					300								
Lys	Leu	Ile	Pro	Val	His	Gln	Val	Arg	Gly	Leu	Lys	Glu	Lys	Ile	Val				
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Arg	Ser	Phe	Glu	Val	Ser	Pro	Asp	Gly	Ser	Phe	Leu	Leu	Ile	Asn	Gly				
				325				330						335					
Ile	Ala	Gly	Tyr	Leu	His	Leu	Leu	Ala	Met	Lys	Thr	Lys	Glu	Leu	Ile				
		340						345					350						
Gly	Ser	Met	Lys	Ile	Asn	Gly	Arg	Val	Ala	Ala	Ser	Thr	Phe	Ser	Ser				
	355					360						365							
Asp	Ser	Lys	Lys	Val	Tyr	Ala	Ser	Ser	Gly	Asp	Gly	Glu	Val	Tyr	Val				
	370					375					380								
Trp	Asp	Val	Asn	Ser	Arg	Lys	Cys	Leu	Asn	Arg	Phe	Val	Asp	Glu	Gly				
385					390					395					400				
Ser	Leu	Tyr	Gly	Leu	Ser	Ile	Ala	Thr	Ser	Arg	Asn	Gly	Gln	Tyr	Val				
				405				410						415					
Ala	Cys	Gly	Ser	Asn	Cys	Gly	Val	Val	Asn	Ile	Tyr	Asn	Gln	Asp	Ser				
		420						425					430						
Cys	Leu	Gln	Glu	Thr	Asn	Pro	Lys	Pro	Ile	Lys	Ala	Ile	Met	Asn	Leu				
	435						440					445							
Val	Thr	Gly	Val	Thr	Ser	Leu	Thr	Phe	Asn	Pro	Thr	Thr	Glu	Ile	Leu				
	450					455					460								
Ala	Ile	Ala	Ser	Glu	Lys	Met	Lys	Glu	Ala	Val	Arg	Leu	Val	His	Leu				
465					470					475					480				
Pro	Ser	Cys	Thr	Val	Phe	Ser	Asn	Phe	Pro	Val	Ile	Lys	Asn	Lys	Asn				
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Ile	Ser																		

<210> 4613

<211> 454

<212> DNA

<213> Homo sapiens

<400> 4613

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 180  
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<210> 4614

<211> 117

<212> PRT

<213> Homo sapiens

<400> 4614

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			20					25					30		
Glu	Phe	Thr	Asn	Gly	Asn	Leu	Thr	Met	Ser	Asn	Glu	Phe	His	Cys	Lys
			35				40					45			
Asp	Phe	Leu	Ile	Phe	Thr	Thr	Gln	Ile	Leu	Thr	Ile	Leu	Gln	Leu	Arg
			50				55					60			
Ser	Leu	Asn	Ile	Ile	Tyr	Asn	Lys	Gln	Asn	Leu	Val	Asn	Leu	Gln	Lys
65					70					75				80	
Ser	Asn	Ala	Leu	Lys	His	Gln	Ser	Leu	Cys	Met	Cys	Arg	Thr	Asp	
			85					90					95		
Pro	Ala	Pro	Gln	Gly	Asn	Thr	Ala	Gly	Thr	Val	Pro	Arg	Thr	Leu	Thr
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Ser	Val	Ser	Leu	Leu											
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<210> 4615

<211> 1350

<212> DNA

<213> Homo sapiens

<400> 4615

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 180  
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 240

tcgtgcttca gcctggagac gaaattgccg ttatcccccc cattagtgga ggatagtgct  
 300  
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 360  
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 420  
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 480  
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 1350

&lt;210&gt; 4616

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4616

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 Leu Pro Leu Ser Pro Pro Leu Val Glu Asp Ser Ala Phe Glu Pro Ser  
 20 25 30  
 Arg Lys Asp Met Asp Glu Val Glu Glu Lys Ser Lys Asp Val Ile Asn  
 35 40 45  
 Phe Thr Ala Glu Lys Leu Ser Val Asp Glu Val Ser Gln Leu Val Ile  
 50 55 60  
 Ser Pro Leu Cys Gly Ala Ile Ser Leu Phe Val Gly Thr Thr Arg Asn

65					70					75				80
Asn	Phe	Glu	Gly	Lys	Lys	Val	Ile	Ser	Leu	Glu	Tyr	Glu	Ala	Tyr
				85					90					95
Pro	Met	Ala	Glu	Asn	Glu	Val	Arg	Lys	Ile	Cys	Ser	Asp	Ile	Arg
				100					105					110
Lys	Trp	Pro	Val	Lys	His	Ile	Ala	Val	Phe	His	Leu	Leu	Gly	Leu
				115				120						125
Pro	Val	Ser	Glu	Ala	Ser	Thr	Val	Ile	Ala	Val	Ser	Ser	Ala	His
				130				135						140
Ala	Ala	Ser	Leu	Glu	Ala	Val	Ser	Tyr	Ala	Ile	Asp	Ser	Leu	Lys
				145				150						155
Lys	Val	Pro	Ile	Trp	Lys	Lys	Glu	Ile	Tyr	Glu	Glu	Ser	Ser	Thr
				160										165
Lys	Gly	Asn	Lys	Glu	Cys	Phe	Trp	Ala	Ser	Asn	Ser			
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				180										185

&lt;210&gt; 4617

&lt;211&gt; 2266

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4617

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960

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&lt;210&gt; 4618

&lt;211&gt; 197

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4618

Met Phe Leu Asp Ser Lys Glu Glu Gly Thr Ser Gln Ala Pro Asn Lys  
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 Asp Pro Thr Ala Ala Ala Ala Ala Leu Asn Gly Gly His Cys Leu Ala

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Gln Pro Thr Ala Glu Pro Gly Leu Gly Ala Val Val Arg Ser Ile Lys
      35      40      45
Val Ser Gly Tyr Leu Asn Leu Leu Ala Asn Thr Ile Asp Asn Phe Thr
      50      55      60
His Gly Leu Ala Val Ala Ala Ser Phe Leu Val Ser Lys Lys Ile Gly
65      70      75      80
Leu Leu Thr Thr Met Ala Ile Leu Leu His Glu Ile Pro His Glu Val
      85      90      95
Gly Asp Phe Ala Ile Leu Leu Arg Ala Gly Phe Asp Arg Trp Ser Ala
      100      105      110
Ala Lys Leu Gln Leu Ser Thr Ala Leu Gly Gly Leu Leu Gly Ala Gly
      115      120      125
Phe Ala Ile Cys Thr Gln Ser Pro Lys Gly Val Glu Glu Thr Ala Ala
      130      135      140
Trp Val Leu Pro Phe Thr Ser Gly Gly Phe Leu Tyr Ile Ala Leu Val
145      150      155      160
Asn Val Leu Pro Asp Leu Leu Glu Glu Glu Asp Pro Trp Arg Ser Leu
      165      170      175
Gln Gln Leu Leu Leu Leu Cys Ala Gly Ile Val Val Met Val Leu Phe
      180      185      190
Ser Leu Phe Val Asp
      195

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&lt;210&gt; 4619

&lt;211&gt; 539

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4619

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539

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&lt;210&gt; 4620

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4620

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Thr Lys Phe His Arg Leu Phe Leu Leu Pro Thr Gly Tyr Gly Gln Gly
      20      25      30
Leu Gln Ala Arg Pro Asn Pro Arg Phe Pro Gly Arg Cys Thr Pro Gly
      35      40      45
Trp Glu Lys Leu Thr Asn Glu Ser Ser Trp Gln Pro Pro Gln Ala Pro
      50      55      60
Pro Asp Trp Ala Ser Trp Leu Cys Cys Gln Asp Tyr Asp Pro Leu Pro
65      70      75      80
Glu Ser Arg Arg Ser Pro Gln Ala Glu Arg Tyr Arg His Leu Cys Pro
      85      90      95
Tyr Leu Asn Gln Glu Val Pro
      100

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&lt;210&gt; 4621

&lt;211&gt; 2588

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4621

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960

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2588

<210> 4622  
<211> 403  
<212> PRT  
<213> Homo sapiens .

<400> 4622

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Ile	Gly	Lys	Lys	Gly	Glu	Thr	Val	Lys	Arg	Ile	Arg	Glu	Gln	Ser	Ser	35	40	45	
Ala	Arg	Ile	Thr	Ile	Ser	Glu	Gly	Ser	Cys	Pro	Glu	Arg	Ile	Thr	Thr	50	55	60	
Ile	Thr	Gly	Ser	Thr	Ala	Ala	Val	Phe	His	Ala	Val	Ser	Met	Ile	Ala	65	70	75	80
Phe	Lys	Leu	Asp	Glu	Asp	Leu	Cys	Ala	Ala	Pro	Ala	Asn	Gly	Gly	Asn	85	90	95	
Val	Ser	Arg	Pro	Pro	Val	Thr	Leu	Arg	Leu	Val	Ile	Pro	Ala	Ser	Gln	100	105	110	
Cys	Gly	Ser	Leu	Ile	Gly	Lys	Ala	Gly	Thr	Lys	Ile	Lys	Glu	Ile	Arg	115	120	125	
Glu	Thr	Thr	Gly	Ala	Gln	Val	Gln	Val	Ala	Gly	Asp	Leu	Leu	Pro	Asn	130	135	140	
Ser	Thr	Glu	Arg	Ala	Val	Thr	Val	Ser	Gly	Val	Pro	Asp	Ala	Ile	Ile	145	150	155	160
Leu	Cys	Val	Arg	Gln	Ile	Cys	Ala	Val	Ile	Leu	Glu	Ser	Pro	Pro	Lys	165	170	175	
Gly	Ala	Thr	Ile	Pro	Tyr	His	Pro	Ser	Leu	Ser	Leu	Gly	Thr	Val	Leu	180	185	190	
Leu	Ser	Ala	Asn	Gln	Gly	Phe	Ser	Val	Gln	Gly	Gln	Tyr	Gly	Ala	Val	195	200	205	
Thr	Pro	Ala	Glu	Val	Thr	Lys	Leu	Gln	Gln	Leu	Ser	Ser	His	Ala	Val	210	215	220	
Pro	Phe	Ala	Thr	Pro	Ser	Val	Val	Pro	Gly	Leu	Asp	Pro	Gly	Thr	Gln	225	230	235	240
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Ile	Gly	Arg	Gln	Gly	Ser	Lys	Ile	Ser	Glu	Ile	Arg	Gln	Met	Ser	Gly	260	265	270	
Ala	His	Ile	Lys	Ile	Gly	Asn	Gln	Ala	Glu	Gly	Ala	Gly	Glu	Arg	His	275	280	285	
Val	Thr	Ile	Thr	Gly	Ser	Pro	Val	Ser	Ile	Ala	Leu	Ala	Gln	Tyr	Leu	290	295	300	
Ile	Thr	Ala	Cys	Leu	Glu	Thr	Ala	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Pro	305	310	315	320
Gly	Ser	Ala	Pro	Ala	Asp	Leu	Pro	Thr	Pro	Phe	Ser	Pro	Pro	Leu	Thr	325	330	335	
Ala	Leu	Pro	Thr	Ala	Pro	Pro	Gly	Leu	Leu	Gly	Thr	Pro	Tyr	Ala	Ile	340	345	350	
Ser	Leu	Ser	Asn	Phe	Ile	Gly	Leu	Lys	Pro	Val	Pro	Phe	Leu	Ala	Leu				

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Lys	Met	Ala	Ala	Ala	Asn	Gly
385			390		395	
Ser	Pro	Tyr				

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 <212> DNA  
 <213> Homo sapiens

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 180  
 atgcctctag tgaagaaaaa gaagaagaaa aagaagggtg tcagcaccct ttgcgaggag  
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 660  
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&lt;210&gt; 4624

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4624

Met	Lys	Ser	Lys	Lys	Lys	Val	Glu	Gln	Pro	Val	Ile	Glu	Glu	Pro	Ala
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Leu	Lys	Arg	Lys	Lys	Lys	Lys	Lys	Arg	Lys	Glu	Ser	Gly	Val	Ala	Gly
		20						25					30		
Asp	Pro	Trp	Lys	Glu	Glu	Thr	Asp	Thr	Asp	Leu	Glu	Val	Val	Leu	Glu
		35					40					45			
Lys	Lys	Gly	Asn	Met	Asp	Glu	Ala	His	Ile	Asp	Gln	Val	Arg	Arg	Lys
		50				55					60				
Ala	Leu	Gln	Glu	Glu	Ile	Asp	Arg	Glu	Ser	Gly	Lys	Thr	Glu	Ala	Ser
65					70				75					80	
Glu	Thr	Arg	Lys	Trp	Thr	Gly	Thr	Gln	Phe	Gly	Gln	Trp	Asp	Thr	Ala
			85					90					95		
Gly	Phe	Glu	Asn	Glu	Asp	Gln	Lys	Leu	Lys	Phe	Leu	Arg	Leu	Met	Gly



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4627

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420  
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<210> 4628

<211> 469

<212> PRT

<213> Homo sapiens

<400> 4628

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Pro	Asp	Phe	Gly	Gly	Leu	Gly	Glu	Glu	Ala	Glu	Phe	Val	Glu	Val	Glu
			20					25					30		
Pro	Glu	Ala	Lys	Gln	Glu	Ile	Leu	Glu	Asn	Lys	Asp	Val	Val	Val	Gln
			35					40					45		
His	Val	His	Phe	Asp	Gly	Leu	Gly	Arg	Thr	Lys	Asp	Asp	Ile	Ile	Ile
	50					55					60				
Cys	Glu	Ile	Gly	Asp	Val	Phe	Lys	Ala	Lys	Asn	Leu	Ile	Glu	Val	Met
65					70					75					80
Arg	Lys	Ser	His	Glu	Ala	Arg	Glu	Lys	Leu	Leu	Arg	Leu	Gly	Ile	Phe
				85					90					95	
Arg	Gln	Val	Asp	Val	Leu	Ile	Asp	Thr	Cys	Gln	Gly	Asp	Gly	Ala	Leu
			100					105					110		
Pro	Asn	Gly	Leu	Asp	Val	Thr	Phe	Glu	Val	Thr	Glu	Leu	Arg	Arg	Leu
			115					120					125		
Thr	Gly	Ser	Tyr	Asn	Thr	Met	Val	Gly	Asn	Asn	Glu	Gly	Ser	Met	Val
	130					135					140				
Leu	Gly	Leu	Lys	Leu	Pro	Asn	Leu	Leu	Gly	Arg	Ala	Glu	Lys	Val	Thr
145					150					155					160
Phe	Gln	Phe	Ser	Tyr	Gly	Thr	Lys	Glu	Thr	Ser	Tyr	Gly	Leu	Ser	Phe
				165					170					175	
Phe	Lys	Pro	Arg	Pro	Gly	Asn	Phe	Glu	Arg	Asn	Phe	Ser	Val	Asn	Leu
			180					185					190		
Tyr	Lys	Val	Thr	Gly	Gln	Phe	Pro	Trp	Ser	Ser	Leu	Arg	Glu	Thr	Asp
		195					200					205			
Arg	Gly	Met	Ser	Ala	Glu	Tyr	Ser	Phe	Pro	Ile	Trp	Lys	Thr	Ser	His
	210					215					220				
Thr	Val	Lys	Trp	Glu	Gly	Val	Trp	Arg	Glu	Leu	Gly	Cys	Leu	Ser	Arg
225					230					235					240
Thr	Ala	Ser	Phe	Ala	Val	Arg	Lys	Glu	Ser	Gly	His	Ser	Leu	Lys	Ser
				245					250					255	
Ser	Leu	Ser	His	Ala	Met	Val	Ile	Asp	Ser	Arg	Asn	Ser	Ser	Ile	Leu
			260					265					270		
Pro	Arg	Arg	Gly	Ala	Leu	Leu	Lys	Val	Asn	Gln	Glu	Leu	Ala	Gly	Tyr
			275				280						285		
Thr	Gly	Gly	Asp	Val	Ser	Phe	Ile	Lys	Glu	Asp	Phe	Glu	Leu	Gln	Leu
	290					295					300				
Asn	Lys	Gln	Leu	Ile	Phe	Asp	Ser	Val	Phe	Ser	Ala	Ser	Phe	Trp	Gly

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305          310          315          320
Gly Met Leu Val Pro Ile Gly Asp Lys Pro Ser Ser Ile Ala Asp Arg
          325          330          335
Phe Tyr Leu Gly Gly Pro Thr Ser Val Arg Gly Phe Ser Met His Ser
          340          345          350
Ile Gly Pro Gln Ser Glu Gly Asp Tyr Leu Gly Gly Glu Ala Tyr Trp
          355          360          365
Ala Gly Gly Leu His Leu Tyr Thr Pro Leu Pro Phe Arg Pro Gly Gln
          370          375          380
Gly Gly Phe Gly Glu Leu Phe Arg Thr His Phe Phe Leu Asn Ala Gly
385          390          395          400
Asn Leu Cys Asn Leu Asn Tyr Gly Glu Gly Pro Lys Ala His Ile Arg
          405          410          415
Lys Leu Ala Glu Cys Ile Arg Trp Ser Tyr Gly Ala Gly Ile Val Leu
          420          425          430
Arg Leu Gly Asn Ile Ala Arg Leu Glu Leu Asn Tyr Cys Val Pro Met
          435          440          445
Gly Val Gln Thr Gly Asp Arg Ile Cys Asp Gly Val Gln Phe Gly Ala
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Gly Ile Arg Phe Leu
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<210> 4629
<211> 706
<212> DNA
<213> Homo sapiens

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120
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180
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240
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360
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660
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706

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<210> 4630

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<211> 140  
 <212> PRT  
 <213> Homo sapiens

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 20 25 30  
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 35 40 45  
 Ser Trp Ala Leu Arg Val Ser Val Phe Pro Gln Ile Gly Lys Met Arg  
 50 55 60  
 Gly Arg Gly Gly Tyr Trp Gly Gln Ala Ser Ala Gln Pro Trp Val Leu  
 65 70 75 80  
 Leu Glu Pro Gly Leu Glu Pro Glu Val Gly Arg Val Ser Lys Leu Ser  
 85 90 95  
 Ser Trp Ile Pro Ile Cys Arg Thr Ala Pro Arg Thr Arg Ser Gly Val  
 100 105 110  
 Arg Ala His Pro Leu Ala Arg Ile Leu Gly Ser Leu Gly His Lys Ala  
 115 120 125  
 Gly Gln Gly Thr Arg Asp Pro Pro Thr Gln Glu Thr  
 130 135 140

<210> 4631  
 <211> 2756  
 <212> DNA  
 <213> Homo sapiens

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 180  
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 240  
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 660  
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 720



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<210> 4632

<211> 372

<212> PRT

<213> Homo sapiens

<400> 4632

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			20					25					30		
Asp	Leu	Gln	Ile	Ala	Leu	Ala	Ser	Phe	Tyr	Glu	Asp	Gly	Gly	Asp	Glu
		35					40					45			
Asp	Ile	Val	Thr	Ile	Ser	Gln	Ala	Thr	Pro	Ser	Ser	Val	Ser	Arg	Gly
		50				55					60				
Thr	Ala	Pro	Ser	Asp	Asn	Arg	Val	Thr	Ser	Phe	Arg	Asp	Leu	Ile	His
65				70					75					80	
Asp	Gln	Asp	Glu	Asp	Glu	Glu	Glu	Glu	Gly	Gln	Arg	Ser	Arg	Phe	
			85					90					95		
Tyr	Ala	Gly	Gly	Ser	Glu	Arg	Ser	Gly	Gln	Gln	Ile	Val	Gly	Pro	Pro
			100					105					110		
Arg	Lys	Lys	Ser	Pro	Asn	Glu	Leu	Val	Asp	Asp	Leu	Phe	Lys	Gly	Ala
		115				120					125				
Lys	Glu	His	Gly	Ala	Val	Ala	Val	Glu	Arg	Val	Thr	Lys	Ser	Pro	Gly
		130				135					140				
Glu	Thr	Ser	Lys	Pro	Arg	Pro	Phe	Ala	Gly	Gly	Gly	Tyr	Arg	Leu	Gly
145				150					155					160	
Ala	Ala	Pro	Glu	Glu	Ser	Ala	Tyr	Val	Ala	Gly	Glu	Lys	Arg	Gln	
			165					170					175		
His	Ser	Ser	Gln	Asp	Val	His	Val	Val	Leu	Lys	Leu	Trp	Lys	Ser	Gly
			180					185					190		
Phe	Ser	Leu	Asp	Asn	Gly	Glu	Leu	Arg	Ser	Tyr	Gln	Asp	Pro	Ser	Asn
		195				200						205			
Ala	Gln	Phe	Leu	Glu	Ser	Ile	Arg	Arg	Gly	Glu	Val	Pro	Ala	Glu	Leu
		210				215					220				
Arg	Arg	Leu	Ala	His	Gly	Gly	Gln	Val	Asn	Leu	Asp	Met	Glu	Asp	His
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Arg	Asp	Glu	Asp	Phe	Val	Lys	Pro	Lys	Gly	Ala	Phe	Lys	Ala	Phe	Thr
			245						250					255	
Gly	Glu	Gly	Gln	Lys	Leu	Gly	Ser	Thr	Ala	Pro	Gln	Val	Leu	Ser	Thr

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                275                280                285
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                290                295                300
Ala Asp Gly Gly Arg Leu Val Gln Lys Phe Asn His Ser His Arg Ile
305                310                315                320
Ser Asp Ile Arg Leu Phe Ile Val Asp Ala Arg Pro Ala Met Ala Ala
                325                330                335
Thr Ser Phe Ile Leu Met Thr Thr Phe Pro Asn Lys Glu Leu Ala Asp
                340                345                350
Glu Ser Gln Thr Leu Lys Glu Ala Asn Leu Leu Asn Ala Val Ile Val
                355                360                365
Gln Arg Leu Thr
370

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&lt;210&gt; 4633

&lt;211&gt; 873

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4633

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&lt;210&gt; 4634

<211> 242  
 <212> PRT  
 <213> Homo sapiens

<400> 4634

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      20           25           30
Ala Asn Leu Gly Lys Phe Leu Glu Leu Arg Ser His Gln Ser Arg
      35           40           45 .
Pro Ala Lys Cys Leu Thr Ile Met Trp Ala Leu Gly Gln Ala Gly Phe
      50           55           60
Ala Asn Leu Thr Glu Gly Leu Lys Val Trp Leu Gly Ile Met Leu Pro
65           70           75           80
Val Leu Gly Ile Lys Ser Leu Ser Pro Phe Ala Ile Thr Tyr Leu Asp
      85           90           95
Arg Leu Leu Leu Met His Pro Asn Leu Thr Lys Gly Phe Gly Met Ile
      100          105          110
Gly Pro Lys Asp Phe Phe Pro Leu Leu Asp Phe Ala Tyr Met Pro Asn
      115          120          125
Asn Ser Leu Thr Pro Ser Leu Gln Glu Gln Leu Cys Gln Leu Tyr Pro
      130          135          140
Arg Leu Lys Val Leu Ala Phe Gly Ala Lys Pro Asp Ser Thr Leu His
145          150          155          160
Thr Tyr Phe Pro Ser Phe Leu Ser Arg Ala Thr Pro Ser Cys Pro Pro
      165          170          175
Glu Met Lys Lys Glu Leu Leu Ser Ser Leu Thr Glu Cys Leu Thr Val
      180          185          190
Asp Pro Leu Ser Ala Ser Val Trp Arg Gln Leu Tyr Pro Lys His Leu
      195          200          205
Ser Gln Ser Ser Leu Leu Leu Glu His Leu Leu Ser Ser Trp Glu Gln
      210          215          220
Ile Pro Lys Lys Val Gln Lys Ser Leu Gln Glu Thr Ile Gln Ser Leu
225          230          235          240
Lys Leu

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<210> 4635  
 <211> 384  
 <212> DNA  
 <213> Homo sapiens

<400> 4635

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180
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240
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300

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<210> 4636  
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 <212> PRT  
 <213> Homo sapiens

<400> 4636  
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 Lys Glu Val Lys Trp Gly Pro Arg Arg Lys Ala Gly Gly Val Trp Ala  
 35 40 45  
 Glu Pro Ala Ser Gly Gly Leu Pro Pro Pro Glu Asp Glu Phe Cys Ser  
 50 55 60  
 Pro Gly Val Cys Thr Leu Thr Leu Ala His Ser Leu Thr His Lys Thr  
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 Leu Thr Leu Cys Phe Trp Gly Glu Gly His Trp Gln Lys Arg  
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 360  
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 480  
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720  
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960  
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1980  
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2162

&lt;210&gt; 4638

&lt;211&gt; 446

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4638

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Leu Ser Cys Phe Ser Phe Asn Gln Asp Cys Thr Ser Leu Ala Ile Gly
          20          25          30
Thr Lys Ala Gly Tyr Lys Leu Phe Ser Leu Ser Ser Val Glu Gln Leu
          35          40          45
Asp Gln Val His Gly Ser Asn Glu Ile Pro Asp Val Tyr Ile Val Glu
          50          55          60
Arg Leu Phe Ser Ser Ser Leu Val Val Val Val Ser His Thr Lys Pro
          65          70          75          80
Arg Gln Met Asn Val Tyr His Phe Lys Lys Gly Thr Glu Ile Cys Asn
          85          90          95
Tyr Ser Tyr Ser Ser Asn Ile Leu Ser Ile Arg Leu Asn Arg Gln Arg
          100          105          110
Leu Leu Val Cys Leu Glu Glu Ser Ile Tyr Ile His Asn Ile Lys Asp
          115          120          125
Met Lys Leu Leu Lys Thr Leu Leu Asp Ile Pro Ala Asn Pro Thr Gly
          130          135          140
Leu Cys Ala Leu Ser Ile Asn His Ser Asn Ser Tyr Leu Ala Tyr Pro
          145          150          155          160
Gly Ser Leu Thr Ser Gly Glu Ile Val Leu Tyr Asp Gly Asn Ser Leu
          165          170          175
Lys Thr Val Cys Thr Ile Ala Ala His Glu Gly Thr Leu Ala Ala Ile
          180          185          190
Thr Phe Asn Ala Ser Gly Ser Lys Leu Ala Ser Ala Ser Glu Lys Gly
          195          200          205
Thr Val Ile Arg Val Phe Ser Val Pro Asp Gly Gln Lys Leu Tyr Glu
          210          215          220
Phe Arg Arg Gly Met Lys Arg Tyr Val Thr Ile Ser Ser Leu Val Phe
          225          230          235          240
Ser Met Asp Ser Gln Phe Leu Cys Ala Ser Ser Asn Thr Glu Thr Val
          245          250          255
His Ile Phe Lys Leu Glu Gln Val Thr Asn Ser Arg Pro Glu Glu Pro
          260          265          270
Ser Thr Trp Ser Gly Tyr Met Gly Lys Met Phe Met Ala Ala Thr Asn
          275          280          285
Tyr Leu Pro Thr Gln Val Ser Asp Met Met His Gln Asp Arg Ala Phe
          290          295          300
Ala Thr Ala Arg Leu Asn Phe Ser Gly Gln Arg Asn Ile Cys Thr Leu
          305          310          315          320
Ser Thr Ile Gln Lys Leu Pro Arg Leu Leu Val Ala Ser Ser Ser Gly
          325          330          335
His Leu Tyr Met Tyr Asn Leu Asp Pro Gln Asp Gly Gly Glu Cys Val
          340          345          350
Leu Ile Lys Thr His Ser Leu Leu Gly Ser Gly Thr Thr Glu Glu Asn
          355          360          365
Lys Glu Asn Asp Leu Arg Pro Ser Leu Pro Gln Ser Tyr Ala Ala Thr
          370          375          380
Val Ala Arg Pro Ser Ala Ser Ser Ala Ser Thr Val Pro Gly Tyr Ser

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385		390		395		400
Glu Asp Gly Gly Ala Leu Arg Gly Glu Val Ile Pro Glu His Glu Phe						
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Ala Thr Gly Pro Val Cys Leu Asp Asp Glu Asn Glu Phe Pro Pro Ile						
	420		425		430	
Ile Leu Cys Arg Gly Asn Gln Lys Gly Lys Thr Lys Gln Ser						
	435		440		445	

&lt;210&gt; 4639

&lt;211&gt; 1007

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4639

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240
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300
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600
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720
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780
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960
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1007

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&lt;210&gt; 4640

&lt;211&gt; 71

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



&lt;400&gt; 4640

Met Asn Thr Ile Gly Phe His Lys Ser Phe Cys Cys Cys Leu Asp Ser  
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 Pro Cys Phe Phe Leu Glu Arg Asn Ile Pro Asn Phe Leu Leu Leu  
 20 25 30  
 Leu Arg Arg Ser Phe Ala Leu Val Ala Gln Ala Arg Val Gln Trp Arg  
 35 40 45  
 Asp Leu Ser Ser Leu Gln Pro Pro Pro Arg Leu Lys Arg Phe Ser  
 50 55 60  
 His Leu Ser Leu Pro Ser Ser  
 65 70

&lt;210&gt; 4641

&lt;211&gt; 1873

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4641

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 120  
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 1860  
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 1873

&lt;210&gt; 4642

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4642

Met	Gly	Cys	Asp	Gly	Gly	Thr	Ile	Pro	Lys	Arg	His	Glu	Leu	Val	Lys
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Gly	Pro	Lys	Lys	Val	Glu	Lys	Val	Asp	Lys	Asp	Ala	Glu	Leu	Val	Ala
			20					25					30		
Gln	Trp	Asn	Tyr	Cys	Thr	Leu	Ser	Gln	Glu	Ile	Leu	Arg	Arg	Pro	Ile
		35				40					45				
Val	Ala	Cys	Glu	Leu	Gly	Arg	Leu	Tyr	Asn	Lys	Asp	Ala	Val	Ile	Glu
	50				55					60					
Phe	Leu	Leu	Asp	Lys	Ser	Ala	Glu	Lys	Ala	Leu	Gly	Lys	Ala	Ala	Ser
65				70					75					80	
His	Ile	Lys	Ser	Ile	Lys	Asn	Val	Thr	Glu	Leu	Lys	Leu	Ser	Asp	Asn
			85					90					95		
Pro	Ala	Trp	Glu	Gly	Asp	Lys	Gly	Asn	Thr	Lys	Gly	Asp	Lys	His	Asp
		100						105					110		
Asp	Leu	Gln	Arg	Ala	Arg	Phe	Ile	Cys	Pro	Val	Val	Gly	Leu	Glu	Met
		115					120					125			
Asn	Gly	Arg	His	Arg	Phe	Cys	Phe	Leu	Arg	Cys	Cys	Gly	Cys	Val	Phe
	130					135					140				
Ser	Glu	Arg	Ala	Leu	Lys	Glu	Ile	Lys	Ala	Glu	Val	Cys	His	Thr	Cys

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          165          170          175
Glu Asp Val Asp Val Leu Lys Thr Arg Met Glu Glu Arg Arg Leu Arg
          180          185          190
Ala Lys Leu Glu Lys Lys Thr Lys Lys Pro Lys Ala Ala Glu Ser Val
          195          200          205
Ser Lys Pro Asp Val Ser Glu Glu Ala Pro Gly Pro Ser Lys Val Lys
          210          215          220
Thr Gly Lys Pro Glu Glu Ala Ser Leu Asp Ser Arg Glu Lys Lys Thr
          225          230          235          240
Asn Leu Ala Pro Lys Ser Thr Ala Met Asn Glu Ser Ser Ser Gly Lys
          245          250          255
Ala Gly Lys Pro Pro Cys Gly Ala Thr Lys Arg Ser Ile Ala Asp Ser
          260          265          270
Glu Glu Ser Glu Ala Tyr Lys Ser Leu Phe Thr Thr His Ser Ser Ala
          275          280          285
Lys Arg Ser Lys Glu Glu Ser Ala His Trp Val Thr His Thr Ser Tyr
          290          295          300
Cys Phe
305

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&lt;210&gt; 4643

&lt;211&gt; 1125

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4643

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780

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<210> 4644

<211> 270

<212> PRT

<213> Homo sapiens

<400> 4644

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		20					25					30			
Gly	Ala	Arg	Val	Val	Ile	Cys	Asp	Lys	Asp	Glu	Ser	Gly	Gly	Arg	Ala
		35				40						45			
Leu	Glu	Gln	Glu	Leu	Pro	Gly	Ala	Val	Phe	Ile	Leu	Cys	Asp	Val	Thr
	50					55				60					
Gln	Glu	Asp	Asp	Met	Lys	Thr	Leu	Val	Ser	Glu	Thr	Ile	Arg	Arg	Phe
65					70					75				80	
Gly	Arg	Leu	Asp	Cys	Val	Val	Asn	Asn	Ala	Gly	His	His	Pro	Pro	Pro
			85						90					95	
Gln	Arg	Pro	Glu	Glu	Thr	Ser	Ala	Gln	Gly	Phe	Arg	Gln	Leu	Leu	Glu
		100						105					110		
Leu	Asn	Leu	Leu	Gly	Thr	Tyr	Thr	Leu	Thr	Lys	Leu	Ala	Leu	Pro	Tyr
	115					120					125				
Leu	Arg	Lys	Ser	Gln	Gly	Asn	Val	Ile	Asn	Ile	Ser	Ser	Leu	Val	Gly
	130					135					140				
Ala	Ile	Gly	Gln	Ala	Gln	Ala	Val	Pro	Tyr	Val	Ala	Thr	Lys	Gly	Ala
145				150						155				160	
Val	Thr	Ala	Met	Thr	Lys	Ala	Leu	Ala	Leu	Asp	Glu	Ser	Pro	Tyr	Gly
			165					170						175	
Val	Arg	Val	Asn	Cys	Ile	Ser	Pro	Gly	Asn	Ile	Trp	Thr	Pro	Leu	Trp
		180						185					190		
Glu	Glu	Leu	Ala	Ala	Leu	Met	Pro	Asp	Pro	Arg	Ala	Thr	Ile	Arg	Glu
		195				200					205				
Gly	Met	Leu	Ala	Gln	Pro	Leu	Gly	Arg	Met	Gly	Gln	Pro	Ala	Glu	Val
	210					215					220				
Gly	Ala	Ala	Ala	Val	Phe	Leu	Ala	Ser	Glu	Ala	Asn	Phe	Cys	Thr	Gly
225				230						235				240	
Ile	Glu	Leu	Leu	Val	Thr	Gly	Gly	Ala	Glu	Leu	Gly	Tyr	Gly	Cys	Lys
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<211> 1725  
<212> DNA  
<213> Homo sapiens

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420  
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<210> 4646

<211> 358

<212> PRT

<213> Homo sapiens

<400> 4646

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			20					25					30		
Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr	Arg	Lys	Leu
		35					40					45			
Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp	Pro	Gln	Ala	Gln
	50					55					60				
Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu	Val	Leu	Ser	Asp	Ser
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Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly	Glu	Glu	Gly	Leu	Lys	Asp
			85						90					95	
Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile	Phe	Ser	His	Phe	Phe	Gly	Asp
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Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr	Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile
		115					120					125			
Pro	Arg	Gly	Ser	Asp	Ile	Ile	Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu
		130				135					140				
Val	Tyr	Ala	Gly	Asn	Phe	Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala
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Thr	Thr	Gln	Leu	Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val
			180					185				190			
Cys	Asp	Glu	Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu
		195				200					205				
Glu	Val	Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe
		210				215					220				
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Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly	Asp
			245					250						255	
Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu	Val	Gly
			260					265					270		
Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val	His	Ile	Ser
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Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp	Lys	Lys	Gly	Glu

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Thr Phe Asp Val Asp Phe Pro Lys Glu Gln Leu Thr Glu Glu Ala Arg
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Glu Gly Ile Lys Gln Leu Leu Lys Gln Gly Ser Val Gln Lys Val Tyr
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Asn Gly Leu Gln Gly Tyr
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&lt;210&gt; 4647

&lt;211&gt; 791

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4647

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&lt;210&gt; 4648

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4648

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Leu Ser Ser Asp Gly Thr Tyr Phe Tyr Trp Ile Trp Ser Pro Ala Ser

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				20					25					30			
Leu	Asn	Glu	Lys	Thr	Pro	Lys	Gly	His	Ser	Val	Phe	Met	Asp	Ile	Phe		
		35					40					45					
Glu	Leu	Val	Val	Glu	Asn	Gly	Val	Phe	Val	Ala	Asn	Pro	Leu	Gln	Glu		
		50				55					60						
Arg	Thr	Ile	Leu	Met	Arg	Lys	Glu	Gly	Glu	Ser	Ala	Lys	Ser	Ile	Asn		
65					70				75						80		
Glu'	Met	Leu	Leu	Ser	Arg	Leu	Ser	Arg	Tyr	Arg	Ala	Ser	Pro	Ser	Ala		
				85				90						95			
Thr	Leu	Ala	Ala	Leu	Thr	Gly	Ser	Thr	Ile	Ser	Asn	Thr	Leu	Lys	Glu		
			100					105					110				
Asp	Gln	Ala	Ala	Asn	Thr	Ser	Cys	Gly	Leu	Pro	Leu	Lys	Met	Leu	Arg		
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Lys	Thr	Pro	Ile	Tyr	Thr	Cys	Gly	Thr	Tyr	Leu	Val	Met	Leu	Val	Pro		
		130				135					140						
Pro	Pro	Gly	Gly	Ser	Gly	Ser	Ser	Ala	Thr	Arg	Ser	Leu	Phe	Gly	Gly		
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<210> 4649
<211> 3276
<212> DNA
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780

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&lt;210&gt; 4650

&lt;211&gt; 965

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4650

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		20						25					30		
Glu	Val	Ala	Val	Lys	Val	Cys	Leu	Leu	Asn	Phe	Met	Ile	Thr	Pro	Leu
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Gly	Leu	Gln	Asp	Gln	Leu	Leu	Gly	Ile	Val	Ala	Ala	Lys	Glu	Lys	Pro
	50				55					60					
Glu	Leu	Glu	Glu	Lys	Lys	Asn	Gln	Leu	Ile	Val	Glu	Ser	Ala	Lys	Asn
	65			70				75						80	
Lys	Lys	His	Leu	Lys	Glu	Ile	Glu	Asp	Lys	Ile	Leu	Glu	Val	Leu	Ser
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Met	Ser	Lys	Gly	Asn	Ile	Leu	Glu	Asp	Glu	Thr	Ala	Ile	Lys	Val	Leu
		100						105				110			
Ser	Ser	Ser	Lys	Val	Leu	Ser	Glu	Glu	Ile	Ser	Glu	Lys	Gln	Lys	Val
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Ala	Ser	Met	Thr	Glu	Thr	Gln	Ile	Asp	Glu	Thr	Arg	Met	Gly	Tyr	Lys

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 Tyr Glu Phe Asn Glu Ser Asp Leu Arg Ile Ser Met Trp Gln Ile Gln  
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&lt;210&gt; 4651

&lt;211&gt; 869

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4651

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&lt;210&gt; 4652

&lt;211&gt; 289

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4652

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1           5           10           15
Met Ala Gly Leu Trp Leu Gly Leu Val Trp Gln Lys Leu Leu Leu Trp
20           25           30
Gly Ala Ala Ser Ala Val Ser Leu Ala Gly Ala Ser Leu Val Leu Ser
35           40           45
Leu Leu Gln Arg Val Ala Ser Tyr Ala Arg Lys Trp Gln Gln Met Arg
50           55           60
Pro Ile Pro Thr Val Ala Arg Ala Tyr Pro Leu Val Gly His Ala Leu
65           70           75           80
Leu Met Lys Pro Asp Gly Arg Glu Phe Phe Gln Gln Ile Ile Glu Tyr
85           90           95
Thr Glu Glu Tyr Arg His Met Pro Leu Leu Lys Leu Trp Val Gly Pro

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100 105 110  
 Val Pro Met Val Ala Leu Tyr Asn Ala Glu Asn Val Glu Val Ile Leu  
 115 120 125  
 Thr Ser Ser Lys Gln Ile Asp Lys Ser Ser Met Tyr Lys Phe Leu Glu  
 130 135 140  
 Pro Trp Leu Gly Leu Gly Leu Leu Thr Ser Thr Gly Asn Lys Trp Arg  
 145 150 155 160  
 Ser Arg Arg Lys Met Leu Thr Pro Thr Phe His Phe Thr Ile Leu Glu  
 165 170 175  
 Asp Phe Leu Asp Ile Met Asn Glu Gln Ala Asn Ile Leu Val Lys Lys  
 180 185 190  
 Leu Glu Lys His Ile Asn Gln Glu Ala Phe Asn Cys Phe Phe Tyr Ile  
 195 200 205  
 Thr Leu Cys Ala Leu Asp Ile Ile Cys Glu Thr Ala Met Gly Lys Asn  
 210 215 220  
 Ile Gly Ala Gln Ser Asn Asp Asp Ser Glu Tyr Val Arg Ala Val Tyr  
 225 230 235 240  
 Arg Met Ser Glu Met Ile Phe Pro Arg Ile Lys Met Pro Trp Leu Trp  
 245 250 255  
 Leu Asp Leu Trp Tyr Leu Met Phe Lys Glu Gly Trp Glu His Lys Lys  
 260 265 270  
 Ser Leu Lys Ile Leu His Thr Phe Thr His Ser Val Ile Pro Glu Arg  
 275 280 285  
 Ala

&lt;210&gt; 4653

&lt;211&gt; 1276

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4653

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 120  
 gtttgaacct ctaacaaaa ggaacgaaga tgccgaggag cctgcctacg gagacacggc  
 180  
 cagtaacgga gatccccaga tccacgtggg actcctgcgc gacagtggca gcgagtgtct  
 240  
 cctcgtgcac gtgctgcagc tgaagaaccc gccggggctg gcggtgaagg aagactgcaa  
 300  
 agtccacatc cgagtctatt tgccccact tcggtggata gcggctgtag caactgcacc  
 360  
 cagaccagcc ctccgtaccc agagccctgt tgcattgggtg tcgactccat cctgggccac  
 420  
 ccatttgctg ctcaggcagg gccttacagc cccgagaaat ttcagccctc gcctcttaag  
 480  
 gttgataagg aaaccaacac ggaagatctc tttctggaag aagcagccag cctcgtgaag  
 540  
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 600  
 tcccagacat tctcgcttgg agcacgaagc cagtatgttt gcagacttta tcgtagtgc  
 660

agcgacagtt caacgctgcc ccggaagtcc ccccttgtcc gaaatacttt ggaaagacga  
 720  
 acccttcgct ataagcagtc atgcaggtct tccctggctg agctcatggc ccgcacctcc  
 780  
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 840  
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 900  
 gacctccac cctgggtgct tcgggacgag cggctccgtg gcctgctgcy ggaggccgag  
 960  
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 1020  
 aagaaggcct ccaaggagat ctaccagctg cgtgggcaga gccacaaaga gcccattcaa  
 1080  
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 1260  
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 1276

<210> 4654

<211> 255

<212> PRT

<213> Homo sapiens

<400> 4654

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Pro	Tyr	Ser	Pro	Glu	Lys	Phe	Gln	Pro	Ser	Pro	Leu	Lys	Val	Asp	Lys
			20					25					30		
Glu	Thr	Asn	Thr	Glu	Asp	Leu	Phe	Leu	Glu	Glu	Ala	Ala	Ser	Leu	Val
		35				40						45			
Lys	Glu	Arg	Pro	Ser	Arg	Arg	Ala	Arg	Gly	Ser	Pro	Phe	Val	Arg	Ser
	50				55					60					
Gly	Thr	Ile	Val	Arg	Ser	Gln	Thr	Phe	Ser	Pro	Gly	Ala	Arg	Ser	Gln
65				70					75					80	
Tyr	Val	Cys	Arg	Leu	Tyr	Arg	Ser	Asp	Ser	Asp	Ser	Ser	Thr	Leu	Pro
			85					90					95		
Arg	Lys	Ser	Pro	Phe	Val	Arg	Asn	Thr	Leu	Glu	Arg	Arg	Thr	Leu	Arg
			100					105					110		
Tyr	Lys	Gln	Ser	Cys	Arg	Ser	Ser	Leu	Ala	Glu	Leu	Met	Ala	Arg	Thr
		115				120						125			
Ser	Leu	Asp	Leu	Glu	Leu	Asp	Leu	Gln	Ala	Ser	Arg	Thr	Arg	Gln	Arg
	130					135					140				
Gln	Leu	Asn	Glu	Glu	Leu	Cys	Ala	Leu	Arg	Glu	Leu	Arg	Gln	Arg	Leu
145				150					155					160	
Glu	Asp	Ala	Gln	Leu	Arg	Gly	Gln	Thr	Asp	Leu	Pro	Pro	Trp	Val	Leu
			165					170					175		
Arg	Asp	Glu	Arg	Leu	Arg	Gly	Leu	Leu	Arg	Glu	Ala	Glu	Arg	Gln	Thr
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Arg	Gln	Thr	Lys	Leu	Asp	Tyr	Arg	His	Glu	Gln	Ala	Ala	Glu	Lys	Met

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<400> 4656
Ala Ala Ala Gln Val Leu Ala Leu Ala Glu Gly Ala His Val Leu His
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Ala Val Gln Arg His Glu Gln Gln Glu Gln Ala Gly His Thr His Arg
                      20                      25                      30
Gln Gln Gln Arg Gln Arg Leu Ala Arg His Gly Val Arg Arg Ala Ala
                      35                      40                      45
Pro Arg Arg Leu Val Val Leu Glu Asp Glu Val Glu Leu Asp Leu Gln
                      50                      55                      60
His Glu Asp Val Lys Glu Pro Gln Asp His Gly Val Ala Ala Leu Gly
65                      70                      75                      80
Arg Ala His Leu Gly Ala His Pro His Gly His Val Ala Gln His Gln
                      85                      90                      95
Gln Glu Ala His Val Ala His Gln His Asp Asp Ala His Ala Asp Leu
                      100                      105                      110
Ala Arg Ala Leu Val Leu Leu His Gln Val Arg Val His Asp Gly His
                      115                      120                      125
Ala Ala His Asp His Gln Arg Gly Gln Ala His Val Ala Pro Val Arg

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130 135 140

Gly Arg Gln His His Gly Arg Pro

145 150

<210> 4657

<211> 723

<212> DNA

<213> Homo sapiens

<400> 4657

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120  
gagtcaggcc tagggaaatc caccctcatc aacagcctct tcctcaccaa cctctatgag  
180  
gatcgccagg tgccagaggc cagtgtctgc ttgacacaga ccctggccat tgagcgccgg  
240  
ggcgtagaga ttgaggaagg ggggtgtgaaa gtgaagctga cccttgtgga cacacctggc  
300  
tttggggact cagtggactg ctctgactgc tggcttccgg tggtgaaatt catcgaggag  
360  
caatttgagc agtaccttag ggatgagagt ggctgaacc ggaagaacat ccaggactcc  
420  
cgagtcact gctgcctcta ctcatctca cccttcggcc gggctccggc ccctagatgt  
480  
ggcttccctc gggcaatata cgagaaagtc aacatcatcc cagtcattgg caaagcggat  
540  
gccctgatgc cccaggaaac ccaggccctc aagcagaaga tccgggatca gttgaaggaa  
600  
gaggagatcc acatctacca gttccccgaa tgtgactctg atgaagatga agacttcaag  
660  
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720  
gta  
723

<210> 4658

<211> 233

<212> PRT

<213> Homo sapiens

<400> 4658

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20 25 30  
Glu Ser Gly Leu Gly Lys Ser Thr Leu Ile Asn Ser Leu Phe Leu Thr  
35 40 45  
Asn Leu Tyr Glu Asp Arg Gln Val Pro Glu Ala Ser Ala Arg Leu Thr  
50 55 60  
Gln Thr Leu Ala Ile Glu Arg Arg Gly Val Glu Ile Glu Glu Gly Gly  
65 70 75 80  
Val Lys Val Lys Leu Thr Leu Val Asp Thr Pro Gly Phe Gly Asp Ser

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      85      90      95
Val Asp Cys Ser Asp Cys Trp Leu Pro Val Val Lys Phe Ile Glu Glu
      100      105      110
Gln Phe Glu Gln Tyr Leu Arg Asp Glu Ser Gly Leu Asn Arg Lys Asn
      115      120      125
Ile Gln Asp Ser Arg Val His Cys Cys Leu Tyr Phe Ile Ser Pro Phe
      130      135      140
Gly Arg Ala Pro Ala Pro Arg Cys Gly Phe Leu Arg Ala Ile His Glu
      145      150      155      160
Lys Val Asn Ile Ile Pro Val Ile Gly Lys Ala Asp Ala Leu Met Pro
      165      170      175
Gln Glu Thr Gln Ala Leu Lys Gln Lys Ile Arg Asp Gln Leu Lys Glu
      180      185      190
Glu Glu Ile His Ile Tyr Gln Phe Pro Glu Cys Asp Ser Asp Glu Asp
      195      200      205
Glu Asp Phe Lys Arg Gln Asp Ala Glu Met Lys Glu Ser Ile Pro Phe
      210      215      220
Ala Val Val Gly Ser Cys Glu Val Val
      225      230

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&lt;210&gt; 4659

&lt;211&gt; 864

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4659

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120
ggcgccggtg gtcgttgtga cccaacctgg agtcgggtccc ggtccggccc ccagaaactc
180
caactggcag acaggcatgt gtgactgttt cagcgactgc ggagtctgtc tctgtggcac
240
attttgtttc ccgtgccttg ggtgtcaagt tgcagctgat atgaatgaat gctgtctgtg
300
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360
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420
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480
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540
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600
tttattataa atgaatgttg tccctgaact tagctaaatg gtgcaactta gtttctcctt
660
gctttcatat tatcgaattc gaatttcctg gcttataaac tttttaaatt acatttgaaa
720
tataaaccaa atgaaatatt ttactgataa gattcttcat gcttctttgc tctccttaaa
780
atgtcttttt cactagttag ttccaagggt cagtctcata attttgttct tatactttga
840

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864

<210> 4660  
<211> 192  
<212> PRT  
<213> Homo sapiens

<400> 4660  
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Asp Gly Glu Glu Leu Lys Leu Lys Arg Cys Leu Leu Asn Phe Val Ala  
20 25 30  
Ser Val Arg Ala Phe His His Gln Phe Leu Glu Ser Thr His Gly Ser  
35 40 45  
Pro Ser Val Asp Ile Ser Leu Asp Leu Ala Lys Ser Thr Met Arg Thr  
50 55 60  
Ala Lys Ser Cys His Ile Val Ile Thr Asn Arg Ser Arg Asp Ala Ile  
65 70 75 80  
Ser Gly Pro Val Glu Ser Pro His Cys Asp Ala Cys Ser Thr Gln Thr  
85 90 95  
Ala Phe Ile His Ile Ser Cys Asn Leu Thr Pro Lys Ala Arg Glu Thr  
100 105 110  
Lys Cys Ala Thr Glu Thr Asp Ser Ala Val Ala Glu Thr Val Thr His  
115 120 125  
Ala Cys Leu Pro Val Gly Val Leu Gly Gly Arg Thr Gly Thr Asp Ser  
130 135 140  
Arg Leu Gly His Asn Asp His Arg Arg Leu Ser Leu His Phe Gln Cys  
145 150 155 160  
Arg Ala Phe His Val Val Phe Ile Cys Gly Glu Ile Leu Ser Gln Ala  
165 170 175  
Thr Arg His Phe Leu Leu Gly Thr Leu Phe Thr Asn Phe His Cys Phe  
180 185 190

<210> 4661  
<211> 153  
<212> DNA  
<213> Homo sapiens

<400> 4661  
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60  
aaacacagcc atgaacagag tgaccgggga gaaggggtgg aggtcgtcca gaatgagccc  
120  
tttgaggacc ctcaccatgg ccatgggcag ttc  
153

<210> 4662  
<211> 51  
<212> PRT  
<213> Homo sapiens

<400> 4662  
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[illegible]

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<210> 4663
<211> 1550
<212> DNA
<213> Homo sapiens
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<400> 4663
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120
cagacggatg acccagggcc cctcgatggc cctgacctcc aggccagcca ctgagagctc
180
caggtgcccc cccctggcag agccggccta ctgaacacct ctggtaccaa aggcttagaa
240
tgtttctcct caactcccac catgaattct tacttttata agttcatgat caaccttctc
300
aagagattca gcagcgaacg gaagctcctg gaggtcagag gccctttcat catcaggcag
360
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420
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480
tccacagagc tcttcagct aagggaaccag ctgaaggacc tgaagaccct ggagagccag
540
aacctgttct gctgcctgta ccgctcctgg tgccacaacc cagtcaccac ggtgtccctc
600
tgcttcctca ccagaacta ccggcacgcc tatgacctca tccagaagtt tggggacctg
660
gaggtcaccg tggacttcct cgcagaggtg gacaagctgg tgcagctgat tgagtgcctc
720
atcttcacat atctgcgcct gcagctgctg gacgtgaaga acaaccctta cctgatcaag
780
gccctctacg gcctgctcat gctcctgccg cagagcagcg ccttcagct gctctcgac
840
cggctccagt gcgtgcccc aacctgagctg ctgcagaccg aagacagtct aaaggcagcc
900
cccaagtccc agaaagctga ctcccctagc atcgactacg cagagctgct gcagcacttt
960
gagaaggtcc agaacaagca cctggaagtg cggcaccagc ggagcgggag tggggaccac
1020
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1080
catgaaacac taagggtcgt cacgccctcc cgaggagctc aaggacctgc ctgtcaggac
1140
cagggtggg cctgcccaacc cagggcagtg ttggggccgg aggctgctgt gtctgcccc
1200

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 1320  
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 1380  
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 1440  
 tgtgtacttg tatgcacgta ggcaccagca caaagatctg aatgatgcac cccaccccca  
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<210> 4664

<211> 347

<212> PRT

<213> Homo sapiens

<400> 4664

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Ser	Asp	Glu	Ser	Asp	Glu	Val	Ile	Leu	Lys	Asp	Leu	Glu	Val	Leu	Ala
		20						25					30		
Glu	Ile	Ala	Ser	Ser	Pro	Ala	Gly	Gln	Thr	Asp	Asp	Pro	Gly	Pro	Leu
	35						40					45			
Asp	Gly	Pro	Asp	Leu	Gln	Ala	Ser	His	Ser	Glu	Leu	Gln	Val	Pro	Thr
	50				55					60					
Pro	Gly	Arg	Ala	Gly	Leu	Asn	Thr	Ser	Gly	Thr	Lys	Gly	Leu	Glu	
65				70					75					80	
Cys	Ser	Pro	Ser	Thr	Pro	Thr	Met	Asn	Ser	Tyr	Phe	Tyr	Lys	Phe	Met
			85					90						95	
Ile	Asn	Leu	Leu	Lys	Arg	Phe	Ser	Ser	Glu	Arg	Lys	Leu	Leu	Glu	Val
		100						105						110	
Arg	Gly	Pro	Phe	Ile	Ile	Arg	Gln	Leu	Cys	Leu	Leu	Leu	Asn	Ala	Glu
	115						120						125		
Asn	Ile	Phe	His	Ser	Met	Ala	Asp	Ile	Leu	Leu	Arg	Glu	Glu	Asp	Leu
	130					135					140				
Lys	Phe	Ala	Ser	Thr	Met	Val	His	Ala	Leu	Asn	Thr	Ile	Leu	Leu	Thr
145					150					155					160
Ser	Thr	Glu	Leu	Phe	Gln	Leu	Arg	Asn	Gln	Leu	Lys	Asp	Leu	Lys	Thr
		165						170						175	
Leu	Glu	Ser	Gln	Asn	Leu	Phe	Cys	Cys	Leu	Tyr	Arg	Ser	Trp	Cys	His
		180					185						190		
Asn	Pro	Val	Thr	Thr	Val	Ser	Leu	Cys	Phe	Leu	Thr	Gln	Asn	Tyr	Arg
	195						200					205			
His	Ala	Tyr	Asp	Leu	Ile	Gln	Lys	Phe	Gly	Asp	Leu	Glu	Val	Thr	Val
	210					215					220				
Asp	Phe	Leu	Ala	Glu	Val	Asp	Lys	Leu	Val	Gln	Leu	Ile	Glu	Cys	Pro
225				230						235				240	
Ile	Phe	Thr	Tyr	Leu	Arg	Leu	Gln	Leu	Leu	Asp	Val	Lys	Asn	Asn	Pro
		245						250						255	
Tyr	Leu	Ile	Lys	Ala	Leu	Tyr	Gly	Leu	Leu	Met	Leu	Leu	Pro	Gln	Ser
	260						265						270		
Ser	Ala	Phe	Gln	Leu	Leu	Ser	His	Arg	Leu	Gln	Cys	Val	Pro	Asn	Pro

		275					280					285				
Glu	Leu	Leu	Gln	Thr	Glu	Asp	Ser	Leu	Lys	Ala	Ala	Pro	Lys	Ser	Gln	
		290				295					300					
Lys	Ala	Asp	Ser	Pro	Ser	Ile	Asp	Tyr	Ala	Glu	Leu	Leu	Gln	His	Phe	
305					310					315					320	
Glu	Lys	Val	Gln	Asn	Lys	His	Leu	Glu	Val	Arg	His	Gln	Arg	Ser	Gly	
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Arg	Gly	Asp	His	Leu	Asp	Arg	Arg	Val	Val	Leu						
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<210> 4665
<211> 1043
<212> DNA
<213> Homo sapiens
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120
aaagagaaaag agccagtggt tgttgagaca gtagaagaga aaaaggaacc tatkctagt
180
tgtccacctt tacgaagccg agcatcacaca ccacctgaag atctccagag tcggttggaa
240
tcttacgtta aagaagtttt tggttcatct ctctctagta attggcaaga catctccctg
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gaagatagtc gtctaaagtt caatcttctg gctcatttag ctgatgactt gggtcattgta
360
gtccctaact ccagactcca ccagatgtgc aggggttagag atgttcttga tttctataat
420
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480
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540
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600
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660
tattacaaat ggacaaataa cggactttct attttcatat ttgctgaaac cattttttta
720
atgaaattag gtcattatct atgaaaagtt ttgagagggc actgtcaact tgggtttaag
780
acaggaggac attgcaagtt cacacctttc ataagcataa agtagttgca agaaagtatt
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900
ttttattaga tagataccta taaaagaac ataaaagtat gttgtgtatt actgacagtt
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1020
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1043

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<210> 4666

<211> 167  
 <212> PRT  
 <213> Homo sapiens

<400> 4666

Xaa	Arg	His	Glu	Gly	Gly	Ser	His	Arg	Lys	Ala	Ala	Arg	Ser	Val	Ser
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Gly	Ile	Thr	Arg	Arg	Val	Phe	Met	Trp	Thr	Val	Ser	Gly	Thr	Pro	Cys
			20					25					30		
Arg	Glu	Phe	Trp	Ser	Arg	Phe	Arg	Lys	Glu	Lys	Glu	Pro	Val	Val	Val
		35					40					45			
Glu	Thr	Val	Glu	Glu	Lys	Lys	Glu	Pro	Ile	Leu	Val	Cys	Pro	Pro	Leu
	50					55					60				
Arg	Ser	Arg	Ala	Tyr	Thr	Pro	Pro	Glu	Asp	Leu	Gln	Ser	Arg	Leu	Glu
65					70				75					80	
Ser	Tyr	Val	Lys	Glu	Val	Phe	Gly	Ser	Ser	Leu	Pro	Ser	Asn	Trp	Gln
			85						90					95	
Asp	Ile	Ser	Leu	Glu	Asp	Ser	Arg	Leu	Lys	Phe	Asn	Leu	Leu	Ala	His
			100					105						110	
Leu	Ala	Asp	Asp	Leu	Gly	His	Val	Val	Pro	Asn	Ser	Arg	Leu	His	Gln
		115					120					125			
Met	Cys	Arg	Val	Arg	Asp	Val	Leu	Asp	Phe	Tyr	Asn	Val	Pro	Ile	Gln
	130					135					140				
Asp	Arg	Ser	Lys	Phe	Asp	Glu	Leu	Ser	Ala	Ser	Asn	Leu	Pro	Pro	Asn
145					150				155					160	
Leu	Lys	Ile	Thr	Trp	Ser	Tyr									
						165									

<210> 4667  
 <211> 1031  
 <212> DNA  
 <213> Homo sapiens

<400> 4667

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<210> 4668

<211> 207

<212> PRT

<213> Homo sapiens

<400> 4668

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			20					25					30		
Ala	Gln	Lys	Ala	Arg	Trp	Leu	Ile	Pro	Leu	Leu	Glu	Gly	Lys	Ala	Arg
		35					40					45			
Ser	Cys	Phe	Ala	Met	Thr	Glu	Pro	Gln	Val	Ala	Ser	Ser	Asp	Ala	Thr
	50					55					60				
Asn	Ile	Glu	Ala	Ser	Ile	Arg	Glu	Glu	Asp	Ser	Phe	Tyr	Val	Ile	Asn
65					70				75					80	
Gly	His	Lys	Trp	Trp	Ile	Thr	Gly	Ile	Leu	Asp	Pro	Arg	Cys	Gln	Leu
			85					90					95		
Cys	Val	Phe	Met	Gly	Lys	Thr	Asp	Pro	His	Ala	Pro	Arg	His	Arg	Gln
			100					105					110		
Gln	Ser	Val	Leu	Leu	Val	Pro	Met	Asp	Thr	Pro	Gly	Ile	Lys	Ile	Ile
			115				120					125			
Arg	Pro	Leu	Thr	Val	Tyr	Gly	Leu	Glu	Asp	Ala	Pro	Gly	Gly	His	Gly
			130			135					140				
Glu	Val	Arg	Phe	Glu	His	Val	Arg	Val	Pro	Lys	Glu	Asn	Met	Val	Leu
145					150					155				160	
Gly	Pro	Gly	Arg	Gly	Phe	Glu	Ile	Ala	Gln	Gly	Arg	Leu	Gly	Pro	Gly
			165					170					175		
Arg	Ile	His	His	Cys	Met	Arg	Leu	Ile	Gly	Phe	Ser	Glu	Arg	Ala	Leu
			180					185					190		
Ala	Leu	Met	Lys	Ala	Arg	Val	Ser	Ala	Phe	Pro	Arg	Thr	Gln	His	
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<210> 4669

<211> 683

<212> DNA

<213> Homo sapiens



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 180  
 cattgtaaag cctttaaaat aaggaagcat tatctccaca ttagagcaac agtagtttct  
 240  
 attcaaagaa gatacagaaa actaactgca gtgcgtaccc aagcagttat ttgtatacag  
 300  
 tcttattaca gaggctttta agtacgaaag gatattcaaa atatgcaccg ggctgccaca  
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 420  
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 683

<210> 4670

<211> 135

<212> PRT

<213> Homo sapiens

<400> 4670

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Asn	Lys	Lys	Lys	Gln	Lys	Val	Phe	Gln	His	Asn	Glu	Leu	Lys	Lys	Glu
			20					25					30		
Thr	Cys	Val	Gln	Ala	Gly	Phe	Gln	Asp	Met	Asn	Ile	Lys	Lys	Gln	Ile
		35					40					45			
Gln	Glu	Gln	His	Gln	Ala	Ala	Ile	Ile	Ile	Gln	Lys	His	Cys	Lys	Ala
		50				55				60					
Phe	Lys	Ile	Arg	Lys	His	Tyr	Leu	His	Ile	Arg	Ala	Thr	Val	Val	Ser
65					70					75					80
Ile	Gln	Arg	Arg	Tyr	Arg	Lys	Leu	Thr	Ala	Val	Arg	Thr	Gln	Ala	Val
			85					90					95		
Ile	Cys	Ile	Gln	Ser	Tyr	Tyr	Arg	Gly	Phe	Lys	Val	Arg	Lys	Asp	Ile
			100					105					110		
Gln	Asn	Met	His	Arg	Ala	Ala	Thr	Leu	Ile	Gln	Ser	Phe	Tyr	Arg	Met
		115					120						125		
His	Arg	Ala	Lys	Val	Asp	Tyr									
		130				135									

<210> 4671

<211> 657

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4671

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120
ggggctcggc aggggctacc cggctccgct tccgccagc aatggagact gcagccacgt
180
taggccaggc tgctgcagtg gtttcagcat ctatccgcag ggatccacgg ggaagctggt
240
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300
acaaacacca ccaacgcgtc ccatgtgcct gtgcagcccg gctcctcagt tgtgatgatg
360
gtcaacaacc tgggtggcct gtcattcctg gaactgggca tcatagccga cgctaccgtc
420
cgctccctgg agggccgcgg ggtgaagatt gcccgcgccc tgggtgggcac cttcatgtca
480
gcactggaga tgctggcat ttctctcacc ctctgctggg tggatgagcc tctcctgaaa
540
ctgatagatg ctgaaaccac tgcagcagcc tggcctcgaa gcggatggcg ctggtgctgg
600
aacgggtgtg cagcactctc ctgggcctgg aggaacacct gaatgccctg gaccggt
657

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&lt;210&gt; 4672

&lt;211&gt; 152

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4672

```

Ala Arg Leu Leu Gln Trp Phe Gln His Leu Ser Ala Gly Ile His Gly
 1           5           10           15
Glu Ala Gly Val Arg Arg Ile Lys Met Ala Thr Ala Asp Glu Ile Val
      20           25           30
Lys Leu Met Leu Asp His Met Thr Asn Thr Thr Asn Ala Ser His Val
      35           40           45
Pro Val Gln Pro Gly Ser Ser Val Val Met Met Val Asn Asn Leu Gly
      50           55           60
Gly Leu Ser Phe Leu Glu Leu Gly Ile Ile Ala Asp Ala Thr Val Arg
65           70           75           80
Ser Leu Glu Gly Arg Gly Val Lys Ile Ala Arg Ala Leu Val Gly Thr
      85           90           95
Phe Met Ser Ala Leu Glu Met Pro Gly Ile Ser Leu Thr Leu Leu
      100          105          110
Val Asp Glu Pro Leu Leu Lys Leu Ile Asp Ala Glu Thr Thr Ala Ala
      115          120          125
Ala Trp Pro Arg Ser Gly Trp Arg Trp Cys Trp Asn Gly Cys Ala Ala
      130          135          140
Leu Ser Trp Ala Trp Arg Asn Thr
145          150

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<210> 4673  
<211> 1335  
<212> DNA  
<213> Homo sapiens

<400> 4673  
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240  
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420  
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1335

<210> 4674

<211> 402  
 <212> PRT  
 <213> Homo sapiens

<400> 4674

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 20           25           30
Ala Asn Ser Leu Ala Ser Ser Gly Pro His Asn Leu Thr Tyr Pro Leu
 35           40           45
Gly Pro Arg Asn Glu Asp Leu Ser Leu Asp Tyr Ala Ser Gln Pro Ala
 50           55           60
Asn Leu Gln Phe Pro His Ile Met Pro Leu Ala Glu Asp Ile Lys Gly
 65           70           75           80
Ser Cys Phe Gln Ser Gly Asn Lys Arg Asn His Glu Pro Phe Ile Ala
 85           90           95
Pro Glu Arg Phe Gly Asn Ser Ser Val Gly Phe Gly Ser Asn Ser His
 100          105          110
Ser Gln Ala Pro Glu Lys Val Thr Leu Leu Val Asp Gly Thr Arg Phe
 115          120          125
Val Val Asn Pro Gln Ile Phe Thr Ala His Pro Asp Thr Met Leu Gly
 130          135          140
Arg Met Phe Gly Pro Gly Arg Glu Tyr Asn Phe Thr Arg Pro Asn Glu
 145          150          155          160
Lys Gly Glu Tyr Glu Ile Ala Glu Gly Ile Ser Ala Thr Val Phe Arg
 165          170          175
Thr Val Leu Asp Tyr Tyr Lys Thr Gly Ile Ile Asn Cys Pro Asp Gly
 180          185          190
Ile Ser Ile Pro Asp Leu Arg Asp Thr Cys Asp Tyr Leu Cys Ile Asn
 195          200          205
Phe Asp Phe Asn Thr Ile Arg Cys Gln Asp Leu Ser Ala Leu Leu His
 210          215          220
Glu Leu Ser Asn Asp Gly Ala His Lys Gln Phe Asp His Tyr Leu Glu
 225          230          235          240
Glu Leu Ile Leu Pro Ile Met Val Gly Cys Ala Lys Lys Gly Glu Arg
 245          250          255
Glu Cys His Ile Val Val Leu Thr Asp Glu Asp Ser Val Asp Trp Asp
 260          265          270
Glu Asp His Pro Pro Pro Met Gly Glu Glu Tyr Ser Gln Ile Leu Tyr
 275          280          285
Ser Ser Lys Leu Tyr Arg Phe Phe Lys Tyr Ile Glu Asn Arg Asp Val
 290          295          300
Ala Lys Thr Val Leu Lys Glu Arg Gly Leu Lys Asn Ile Arg Ile Gly
 305          310          315          320
Ile Glu Gly Tyr Pro Thr Cys Lys Glu Lys Ile Lys Arg Arg Pro Gly
 325          330          335
Gly Arg Ser Glu Val Ile Tyr Asn Tyr Val Gln Arg Pro Phe Ile Gln
 340          345          350
Met Ser Trp Glu Lys Glu Glu Gly Lys Ser Arg His Val Asp Phe Gln
 355          360          365
Cys Val Arg Ser Lys Ser Leu Thr Asn Leu Val Ala Ala Gly Asp Asp
 370          375          380
Val Leu Glu Asp Gln Glu Ile Leu Met His His Pro Pro Gln Val Asp

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385  
Glu Leu

390

395

400

&lt;210&gt; 4675

&lt;211&gt; 2868

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4675

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180  
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2868

&lt;210&gt; 4676

&lt;211&gt; 641

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4676

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 Lys Val Ser Pro Ala Ser Glu Ser Pro Phe Ser Glu Glu Glu Ser Arg  
 20 25 30  
 Glu Phe Asn Pro Ser Ser Ser Gly Arg Ser Ala Arg Thr Val Ser Ser  
 35 40 45  
 Asn Ser Phe Cys Ser Asp Asp Thr Gly Cys Pro Ser Ser Gln Ser Val  
 50 55 60  
 Ser Pro Val Lys Thr Pro Ser Asp Ala Gly Asn Ser Pro Ile Gly Phe  
 65 70 75 80  
 Cys Pro Gly Ser Asp Glu Gly Phe Thr Arg Lys Lys Cys Thr Ile Gly  
 85 90 95  
 Met Val Gly Glu Gly Ser Ile Gln Ser Ser Arg Tyr Lys Lys Glu Ser  
 100 105 110  
 Lys Ser Gly Leu Val Lys Pro Gly Ser Glu Ala Asp Phe Ser Ser Ser  
 115 120 125  
 Ser Ser Thr Gly Ser Ile Ser Ala Pro Glu Val His Met Ser Thr Ala  
 130 135 140  
 Gly Ser Lys Arg Ser Ser Ser Ser Arg Asn Arg Gly Pro His Gly Arg  
 145 150 155 160  
 Ser Asn Gly Ala Ser Ser His Lys Pro Gly Ser Ser Ser Ser Pro  
 165 170 175  
 Arg Glu Lys Asp Leu Leu Ser Met Leu Cys Arg Asn Gln Leu Ser Pro  
 180 185 190  
 Val Asn Ile His Pro Ser Tyr Ala Pro Ser Ser Pro Ser Ser Ser Asn  
 195 200 205  
 Ser Gly Ser Tyr Lys Gly Ser Asp Cys Ser Pro Ile Met Arg Arg Ser  
 210 215 220  
 Gly Arg Tyr Met Ser Cys Gly Glu Asn His Gly Val Arg Pro Pro Asn  
 225 230 235 240  
 Pro Glu Gln Tyr Leu Thr Pro Leu Gln Gln Lys Glu Val Thr Val Arg  
 245 250 255  
 His Leu Lys Thr Lys Leu Lys Glu Ser Glu Arg Arg Leu His Glu Arg  
 260 265 270  
 Glu Ser Glu Ile Val Glu Leu Lys Ser Gln Leu Ala Arg Met Arg Glu  
 275 280 285  
 Asp Trp Ile Glu Glu Glu Cys His Arg Val Glu Ala Gln Leu Ala Leu  
 290 295 300  
 Lys Glu Ala Arg Lys Glu Ile Lys Gln Leu Lys Gln Val Ile Glu Thr  
 305 310 315 320  
 Met Arg Ser Ser Leu Ala Asp Lys Asp Lys Gly Ile Gln Lys Tyr Phe  
 325 330 335  
 Val Asp Ile Asn Ile Gln Asn Lys Lys Leu Glu Ser Leu Leu Gln Ser  
 340 345 350  
 Met Glu Met Ala His Ser Gly Ser Leu Arg Asp Glu Leu Cys Leu Asp  
 355 360 365  
 Phe Pro Cys Asp Ser Pro Glu Lys Ser Leu Thr Leu Asn Pro Pro Leu  
 370 375 380  
 Asp Thr Met Ala Asp Gly Leu Ser Leu Glu Glu Gln Val Thr Gly Glu

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385          390          395          400
Gly Ala Asp Arg Glu Leu Leu Val Gly Asp Ser Ile Ala Asn Ser Thr
          405          410          415
Asp Leu Phe Asp Glu Ile Val Thr Ala Thr Thr Thr Glu Ser Gly Asp
          420          425          430
Leu Glu Leu Val His Ser Thr Pro Gly Ala Asn Val Leu Glu Leu Leu
          435          440          445
Pro Ile Val Met Gly Gln Glu Glu Gly Ser Val Val Val Glu Arg Ala
          450          455          460
Val Gln Thr Asp Val Val Pro Tyr Ser Pro Ala Ile Ser Glu Leu Ile
465          470          475          480
Gln Ser Val Leu Gln Lys Leu Gln Asp Pro Cys Pro Ser Ser Leu Ala
          485          490          495
Ser Pro Asp Glu Ser Glu Pro Asp Ser Met Glu Ser Phe Pro Glu Ser
          500          505          510
Leu Ser Ala Leu Val Val Asp Leu Thr Pro Arg Asn Pro Asn Ser Ala
          515          520          525
Ile Leu Leu Ser Pro Val Glu Thr Pro Tyr Xaa Gln Cys Gly Cys Arg
          530          535          540
Ser Ser Cys Lys Pro Pro His Glu Arg Ala Gly Xaa Phe Ala Ala Cys
545          550          555          560
Val Glu Glu Arg Leu Asp Gly Val Ile Pro Leu Ala Arg Gly Gly Val
          565          570          575
Val Arg Gln Tyr Trp Ser Ser Ser Phe Leu Val Asp Leu Leu Ala Val
          580          585          590
Ala Ala Pro Val Val Pro Thr Val Leu Trp Ala Phe Ser Thr Gln Arg
          595          600          605
Gly Gly Thr Asp Pro Val Tyr Asn Ile Gly Ala Leu Leu Arg Gly Cys
610          615          620
Cys Val Val Ala Leu His Ser Leu Arg Arg Thr Ala Phe Arg Ile Lys
625          630          635          640
Thr

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&lt;210&gt; 4677

&lt;211&gt; 940

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4677

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<400> 4678

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<400> 4684

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100	105	

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 <212> PRT  
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<400> 4688
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Val Ala Val Tyr Ser Leu Ser His Gly Glu Val Ser Tyr Asp Pro Leu
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<210> 4689  
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 <213> Homo sapiens

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&lt;210&gt; 4690

&lt;211&gt; 299

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4690

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Leu His Phe Val Asp Val Asp Asp Leu His Ile Ile Val Gln Glu Leu
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Arg Gly Ser Ile Leu Asp Ala Met Arg Pro Gln Gln Leu His Ala Thr
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Glu Ile Thr Ser Ser Gly Phe Arg Leu Ala Trp Pro Pro Leu Leu Thr
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Ala Asp Ser Gly Tyr Tyr Val Leu Glu Leu Val Pro Ser Ala Gln Pro
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Gly Ala Ala Arg Arg Gln Gln Leu Pro Gly Asn Ala Thr Asp Trp Ile
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&lt;210&gt; 4691

&lt;211&gt; 2375

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4691

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&lt;210&gt; 4692

&lt;211&gt; 383

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4692

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Leu Asn Glu Ala Gly Leu Tyr Trp Arg Ala Val Gly Asn Ser Thr Phe
      50          55          60
Ala Ile Ala Cys Leu Gln Arg Ala Leu Asn Leu Ala Pro Leu Gln Tyr
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Ser Glu Arg Gly Thr Glu Glu Asp Pro Val Phe Ser Val Glu Asn Ser
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Glu Gly Phe Gly Gly Ala Leu Glu Met Lys Gly Arg Arg Leu Asp Leu
      275          280          285
Gln Gly Ile Arg Val Leu Lys Lys Gly Pro Gln Asp Gly Val Ala Arg
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Ser Ser Cys Tyr Gly Asp Cys Arg Ser Glu Asp Asp Glu Ala Thr Glu
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Trp Ile Thr Phe Gln Val Lys Arg Val Lys Lys Pro Lys Gly Asp His
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Lys Lys Thr Pro Gly Lys Lys Val Glu Thr Gly Gln Ile Glu Asn Gly
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 <212> PRT  
 <213> Homo sapiens

<400> 4694  
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 Lys Gly Phe Leu Ala Gly Tyr Val Val Ala Lys Leu Arg Ala Ser Ala  
 50 55 60  
 Val Leu Gly Phe Ala Val Gly Thr Cys Thr Gly Ile Tyr Ala Ala Gln  
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 Ala Tyr Ala Val Pro Asn Val Glu Lys Thr Leu Arg Asp Tyr Leu Gln  
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&lt;210&gt; 4695

&lt;211&gt; 2209

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4695

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<210> 4696

<211> 302

<212> PRT

<213> Homo sapiens

<400> 4696

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Leu	Leu	Lys	Leu	Ile	Asp	Ala	Glu	Thr	Thr	Ala	Ala	Ala	Trp	Pro	Asn
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<210> 4697

<211> 1047

<212> DNA

<213> Homo sapiens

<400> 4697

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<210> 4698  
 <211> 182  
 <212> PRT  
 <213> Homo sapiens

<400> 4698  
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 35 40 45  
 Pro Ser Cys Leu Pro Gly Ile Ser Ile Asn Ser Glu Gln Leu Thr Arg  
 50 55 60  
 Ala Gln Cys Val Thr Val Lys Glu Lys Leu Leu Glu Gln Ala Glu Ser  
 65 70 75 80  
 Leu Leu Ser Glu Pro Met Val His Glu Leu Val Leu Trp Ile Gln Gln  
 85 90 95  
 Asn Leu Arg His Ile Leu Ser Gln Pro Glu Thr Gly Ser Gly Ser Glu  
 100 105 110  
 Lys Cys Thr Phe Ser Thr Ser Thr Thr Met Asp Asp Gly Leu Trp Ile  
 115 120 125  
 Thr Leu Leu His Leu Asp His Met Arg Ala Lys Thr Lys Tyr Val Lys  
 130 135 140  
 Ile Val Glu Lys Trp Ala Ser Asp Leu Arg Leu Thr Gly Arg Leu Met  
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 Phe Met Gly Lys Ile Leu Ile Leu Leu Gln Gly Asp Arg Asn Asn  
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 Leu Lys Val Pro Lys Ser  
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<210> 4699  
 <211> 1441  
 <212> DNA  
 <213> Homo sapiens

<400> 4699  
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 180  
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 240

attacaatta aaataactat attcttctat attttttctg ttaaaatcat ctcataaatt  
 300  
 tacaatgcta ttattagttt ccaagactaa tataaattca ctccattttt ctacaacgaa  
 360  
 aatgattaat ttagaagcac acgacgtcat gatgaaaaac acaagcattt tagtagcaag  
 420  
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 480  
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 1200  
 gcccatgcac gtccaagaca ccagtcttga ctccgacctc taaagagctc cttctcctca  
 1260  
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 1320  
 tcaacatcta tctctataca gtgattctac taaattagaa attctgctgc cccaaagtat  
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 1440  
 t  
 1441

&lt;210&gt; 4700

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4700

Met	Asp	Thr	Ile	Phe	Gly	Asn	Val	Thr	Glu	Tyr	Gln	Arg	Leu	Gln	Leu
1				5					10					15	
Ser	Thr	Arg	Gly	Gln	Ser	Lys	Thr	Gly	Trp	Lys	Leu	Pro	Val	Thr	Leu
			20					25					30		
Ile	Cys	Cys	Pro	Arg	His	Pro	Leu	Met	Arg	Leu	Lys	Leu	Gly	Pro	Ser

<400> 4702  
Arg Gln Gly Phe Thr Leu Thr Arg Met Ile Ser Ile Ser Gly Pro Arg

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      1             5             10             15
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      20             25             30
His Xaa Pro Pro Gly His Phe Phe Leu Glu Thr Arg Ser Tyr Ser Leu
      35             40             45
Ala Lys Asn Gly Val Gln Trp Cys Asn Val Gly Ser Leu Gln Pro Lys
      50             55             60
Pro Pro Gly Leu Lys
65

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<210> 4703

<211> 513

<212> DNA

<213> Homo sapiens

<400> 4703

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300
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420
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513

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<210> 4704

<211> 112

<212> PRT

<213> Homo sapiens

<400> 4704

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      1             5             10             15
Ser Ser Ser Leu Ser Pro Pro Arg Ala Asp Arg Thr Leu Leu Val Arg
      20             25             30
His Leu Pro Ala Glu Leu Thr Ala Glu Glu Lys Glu Asp Leu Leu Lys
      35             40             45
Tyr Phe Gly Ala Gln Ser Val Arg Val Leu Ser Asp Lys Gly Arg Leu
      50             55             60
Lys His Thr Ala Phe Ala Thr Phe Pro Asn Glu Lys Ala Ala Ile Lys
      65             70             75             80
Ala Leu Thr Arg Leu His Gln Leu Lys Leu Leu Gly His Thr Leu Val
      85             90             95
Val Glu Phe Ala Lys Glu Gln Asp Arg Val His Ser Pro Cys Pro Thr

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100

105

110

<210> 4705  
 <211> 569  
 <212> DNA  
 <213> Homo sapiens

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 120  
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 180  
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 420  
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 480  
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<210> 4706  
 <211> 154  
 <212> PRT  
 <213> Homo sapiens

<400> 4706  
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 Lys Ser Asn Lys Ile Phe Val Gly Gly Ile Pro His Asn Cys Gly Glu  
 20 25 30  
 Thr Glu Leu Arg Glu Tyr Phe Lys Lys Phe Gly Val Val Thr Glu Val  
 35 40 45  
 Val Met Ile Tyr Asp Ala Glu Lys Gln Arg Pro Arg Gly Lys Gly Arg  
 50 55 60  
 Ser Ser Leu Thr Ser Ala Phe Ser Leu Leu Leu Pro Gln Met Ala Asn  
 65 70 75 80  
 Tyr Leu Thr Arg Gln Ala His Thr Gly Gly Gly Cys Ser Lys Gln Pro  
 85 90 95  
 Gln Glu Gly Thr Ile Trp Arg Gln Met Thr Lys Thr Trp Ala Pro His  
 100 105 110  
 Val His Pro Ile Gln Pro Val Cys Ala Ser Arg Gly Gln Thr Ser His  
 115 120 125  
 Ile Val Phe Trp Leu Val Leu Leu Lys Phe Leu Arg Leu Val Met Ser  
 130 135 140  
 Leu Gly Leu Ala Ser Val Phe His Cys Pro

145

150

&lt;210&gt; 4707

&lt;211&gt; 748

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4707

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 660  
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 720  
 atgtctgatg accctgtcga agatgata  
 748

&lt;210&gt; 4708

&lt;211&gt; 128

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4708

Met Ala Ala Pro Glu Gln Pro Leu Ala Ile Ser Arg Gly Cys Thr Ser  
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 Ser Ser Ser Leu Ser Pro Pro Arg Gly Asp Arg Thr Leu Leu Val Arg  
 20 25 30  
 His Leu Pro Ala Glu Leu Thr Ala Glu Glu Lys Glu Asp Leu Leu Lys  
 35 40 45  
 Tyr Phe Gly Ala Gln Ser Val Arg Val Leu Ser Asp Lys Gly Arg Leu  
 50 55 60  
 Lys His Thr Ala Phe Ala Thr Phe Pro Asn Glu Lys Ala Ala Ile Lys  
 65 70 75 80  
 Ala Leu Thr Arg Leu His Gln Leu Lys Leu Leu Gly His Thr Leu Val  
 85 90 95  
 Val Glu Phe Ala Lys Glu Gln Asp Arg Val His Ser Pro Cys Pro Thr

	100		105		110
Ser Gly Ser	Glu Lys Lys Lys Met	Ser Asp Asp Pro Val Glu Asp Asp			
	115	120		125	

&lt;210&gt; 4709

&lt;211&gt; 1351

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4709

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 180  
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 240  
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 720  
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 780  
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 960  
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 1320



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1351

<210> 4710

<211> 304

<212> PRT

<213> Homo sapiens

<400> 4710

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Met Asn Asn Ser Gly Ala Asp Glu Ile Gly Lys Leu Phe Val Gly Gly
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      20           25           30
Tyr Gly Glu Val Val Asp Cys Val Ile Met Lys Asp Lys Thr Thr Asn
      35           40           45
Gln Ser Arg Gly Phe Gly Phe Val Lys Phe Lys Asp Pro Asn Cys Val
      50           55           60
Gly Thr Val Leu Ala Ser Arg Pro His Thr Leu Asp Gly Arg Asn Ile
65           70           75           80
Asp Pro Lys Pro Cys Thr Pro Arg Gly Met Gln Pro Glu Arg Thr Arg
      85           90           95
Pro Lys Glu Gly Trp Gln Lys Gly Pro Arg Ser Asp Asn Ser Lys Ser
      100          105          110
Asn Lys Ile Phe Val Gly Gly Ile Pro His Asn Cys Gly Glu Thr Glu
      115          120          125
Leu Arg Glu Tyr Phe Lys Lys Phe Gly Val Val Thr Glu Val Val Met
      130          135          140
Ile Tyr Asp Ala Glu Lys Gln Arg Pro Arg Gly Phe Gly Phe Ile Thr
145          150          155          160
Phe Glu Asp Glu Gln Ser Val Asp Gln Ala Val Asn Met His Phe His
      165          170          175
Asp Ile Met Gly Lys Lys Val Glu Val Lys Arg Ala Glu Pro Arg Asp
      180          185          190
Ser Lys Ser Gln Ala Pro Gly Gln Pro Gly Ala Ser Gln Trp Gly Ser
      195          200          205
Arg Val Val Pro Asn Ala Ala Asn Gly Trp Ala Gly Gln Pro Pro Pro
      210          215          220
Thr Trp Gln Gln Gly Tyr Gly Pro Gln Gly Met Trp Val Pro Ala Gly
225          230          235          240
Gln Ala Ile Gly Gly Tyr Gly Pro Pro Pro Ala Gly Arg Gly Ala Pro
      245          250          255
Pro Pro Pro Pro Phe Thr Ser Tyr Ile Val Ser Thr Pro Pro Gly
      260          265          270
Gly Phe Pro Pro Pro Gln Gly Phe Pro Gln Gly Tyr Gly Ala Pro Pro
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Gln Phe Ser Phe Gly Tyr Gly Pro Pro Pro Pro Pro Pro Gly Ser Arg
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<210> 4711

<211> 2061

<212> DNA

<213> Homo sapiens

<400> 4711

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780  
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840  
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 1980  
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 2061

<210> 4712

<211> 187

<212> PRT

<213> Homo sapiens

<400> 4712

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Leu	Gln	Met	Asp	Val	Met	Pro	Gly	Glu	Gly	Asp	Leu	Pro	Gln	Met	Glu
		20						25					30		
Val	Gly	Ser	Gly	Ser	Arg	Glu	Leu	Ser	Leu	Arg	Pro	Ser	Arg	Ser	Gly
		35					40					45			
Ala	Gln	Gln	Leu	Glu	Glu	Glu	Gly	Pro	Met	Glu	Glu	Glu	Glu	Ala	Gln
	50					55					60				
Pro	Met	Ala	Ala	Pro	Glu	Gly	Lys	Arg	Ser	Leu	Ala	Asn	Gly	Pro	Asn
65					70					75				80	
Ala	Gly	Glu	Gln	Pro	Gly	Gln	Val	Ala	Gly	Ala	Asp	Phe	Glu	Ser	Glu
			85						90				95		
Asp	Glu	Gly	Glu	Glu	Phe	Asp	Asp	Trp	Glu	Asp	Asp	Tyr	Asp	Tyr	Pro
		100						105				110			
Glu	Glu	Glu	Gln	Leu	Ser	Gly	Ala	Gly	Tyr	Arg	Val	Ser	Ala	Ala	Leu
		115					120					125			
Glu	Glu	Ala	Asp	Lys	Met	Phe	Leu	Arg	Thr	Arg	Glu	Pro	Ala	Leu	Asp
		130				135					140				
Gly	Gly	Phe	Gln	Met	His	Tyr	Glu	Lys	Thr	Pro	Phe	Asp	Gln	Leu	Ala
145				150						155				160	
Phe	Ile	Glu	Glu	Leu	Phe	Ser	Leu	Met	Val	Val	Asn	Arg	Leu	Thr	Glu
			165					170					175		
Glu	Leu	Gly	Cys	Asp	Glu	Ile	Ile	Asp	Arg	Glu					
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<210> 4713

<211> 1324

<212> DNA

<213> Homo sapiens

<400> 4713

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120  
ctctcacgga acgcccctct ctcacacaga accccctcct ctcaccgaat cccatctcag  
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240  
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720  
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780  
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900  
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&lt;211&gt; 145

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4714

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&lt;211&gt; 239

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4716

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<212> DNA

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Thr	Phe	Pro	Leu	Glu	Arg	Asp	Glu	Val	Met	Pro	Pro	Pro	Leu	Gln	His
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Pro	Gln	Thr	Asp	Arg	Leu	Thr	Cys	Pro	Lys	Gly	Leu	Pro	Trp	Ala	Pro
				85					90					95	
Lys	Val	Arg	Glu	Lys	Asp	Ile	Glu	Met	Phe	Leu	Glu	Ser	Ser	Arg	Ser
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Lys	Phe	Ile	Gly	Tyr	Thr	Leu	Gly	Ser	Asp	Thr	Asn	Thr	Val	Val	Gly
	115					120						125			
Leu	Pro	Arg	Pro	Ile	His	Glu	Ser	Ile	Lys	Thr	Leu	Lys	Gln	His	Lys
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Glu	Thr	Leu	Tyr	Gln	Gly	Leu	Leu	Pro	Ser	Leu	Pro	Gln	Tyr	Met	Ile
			180					185					190		
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225				230						235				240	
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 65 70 75 80  
 Val Thr Gly Lys Gly Gly Leu Thr Gln Asp Leu Lys Ala Ala Ala Arg  
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 Cys Phe Leu Met Ala Cys Glu Lys Pro Gly Lys Lys Ser Ile Ala Ala  
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Gln	Gly	Ala	Pro	Gly	Phe	Pro	Lys	Asp	Met	Asp	Leu	Ala	Cys	Lys	Tyr				
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Ser	Met	Lys	Ala	Cys	Asp	Leu	Gly	His	Ile	Trp	Ala	Cys	Ala	Asn	Ala				
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Ser	Arg	Met	Tyr																
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&lt;211&gt; 1385

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4721

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<213> Homo sapiens

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<210> 4724  
<211> 54  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 4724

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Met Gly Pro Arg Arg His Arg Ala Ser Ser Ile Leu Pro Gln Thr Leu
 1           5           10           15
Val Gly Val Pro Val Gly Trp Gly Gly Glu Trp Gly Glu Pro Thr Pro
          20           25           30
Gly Pro Pro Ser Pro Phe Pro Arg Gln Ser Pro Phe Gly Leu Asn Pro
          35           40           45
Phe Leu Pro Ala Gly Asp
          50

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&lt;210&gt; 4725

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4725

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240
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360
acgcgt
366

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&lt;210&gt; 4726

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4726

```

Xaa Phe Leu Glu Gly Glu Leu Gly Arg Ser Arg Arg Thr Pro Ala Gly
 1           5           10           15
Gly Arg Gly Ala Met Leu Ala Ile Asp Thr Ala Ser Asp Ile Leu Ala
          20           25           30
His Val His Val Tyr Ser Arg Leu Cys Ala Cys Ala Arg Val Tyr Met
          35           40           45
His Met Cys Thr Gly Ala Cys Ala Cys Val Asn Thr Cys Ser His Val
          50           55           60
Cys Thr Cys Xaa Ser Cys Pro Cys Xaa Tyr Val His Thr Cys Leu Cys
          65           70           75           80
Met His Ala Cys Ile Ala Val Cys Pro Tyr Pro His Val Arg Ile His
          85           90           95
Met Arg Leu Cys Leu His Leu Cys Met His Ala Ser Val Leu Leu Arg
          100          105          110
Ala Trp Val Cys Ile Cys Ala Cys Thr Arg
          115          120

```

&lt;210&gt; 4727

&lt;211&gt; 2031

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4727

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420  
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 2031

&lt;210&gt; 4728

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4728

Met Arg Pro Val Arg Leu Met Lys Val Phe Val Thr Arg Arg Ile Pro  
 1 5 10 15  
 Ala Glu Gly Arg Val Ala Leu Ala Arg Ala Ala Asp Cys Glu Val Glu  
 20 25 30  
 Gln Trp Asp Ser Asp Glu Pro Ile Pro Ala Lys Glu Leu Glu Arg Gly  
 35 40 45  
 Val Ala Gly Ala His Gly Leu Leu Cys Leu Leu Ser Asp His Val Asp  
 50 55 60  
 Lys Arg Ile Leu Asp Ala Ala Gly Ala Asn Leu Lys Val Ile Ser Thr  
 65 70 75 80  
 Met Ser Val Gly Ile Asp His Leu Ala Leu Asp Glu Ile Lys Lys Arg  
 85 90 95  
 Gly Ile Arg Val Gly Tyr Thr Pro Asp Val Leu Thr Asp Thr Thr Ala  
 100 105 110  
 Glu Leu Ala Val Ser Leu Leu Leu Thr Thr Cys Arg Arg Leu Pro Glu  
 115 120 125  
 Ala Ile Glu Glu Val Lys Asn Gly Gly Trp Thr Ser Trp Lys Pro Leu  
 130 135 140  
 Trp Leu Cys Gly Tyr Gly Leu Thr Gln Ser Thr Val Gly Ile Ile Gly  
 145 150 155 160  
 Leu Gly Arg Ile Gly Gln Ala Ile Ala Arg Arg Leu Lys Pro Phe Gly  
 165 170 175  
 Val Gln Arg Phe Leu Tyr Thr Gly Arg Gln Pro Arg Pro Glu Glu Ala  
 180 185 190  
 Ala Glu Phe Gln Ala Glu Phe Val Ser Thr Pro Glu Leu Ala Ala Gln  
 195 200 205  
 Ser Asp Phe Ile Val Val Ala Cys Ser Leu Thr Pro Ala Thr Glu Gly



```

      210              215              220
Leu Cys Asn Lys Asp Phe Phe Gln Lys Met Lys Glu Thr Ala Val Phe
225              230              235              240
Ile Asn Ile Ser Arg Gly Asp Val Val Asn Gln Asp Asp Leu Tyr Gln
      245              250              255
Ala Leu Ala Ser Gly Lys Ile Ala Ala Ala Gly Leu Asp Val Thr Ser
      260              265              270
Pro Glu Pro Leu Pro Thr Asn His Pro Leu Leu Thr Leu Lys Asn Cys
      275              280              285
Val Ile Leu Pro His Ile Gly Ser Ala Thr His Arg Thr Arg Asn Thr
      290              295              300
Met Ser Leu Leu Ala Ala Asn Asn Leu Leu Ala Gly Leu Arg Gly Glu
305              310              315              320
Pro Met Pro Ser Glu Leu Lys Leu
      325

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<210> 4729  
 <211> 753  
 <212> DNA  
 <213> Homo sapiens

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 180  
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 240  
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 300  
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 360  
 agcagctaca gttccaacag cgacttcaac tactcctacc ccaccaagca agctgctctg  
 420  
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 660  
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<210> 4730  
 <211> '148  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 4730

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Met Lys Lys Ala Glu Met Gly Arg Phe Ser Ile Ser Pro Asp Glu Asp
 1           5           10           15
Ser Ser Ser Tyr Ser Ser Asn Ser Asp Phe Asn Tyr Ser Tyr Pro Thr
 20           25           30
Lys Gln Ala Ala Leu Lys Ser His Tyr Ala Asp Val Asp Pro Glu Asn
 35           40           45
Gln Asn Phe Leu Leu Glu Ser Asn Leu Gly Lys Lys Lys Tyr Glu Thr
 50           55           60
Glu Phe His Pro Gly Thr Thr Ser Phe Gly Met Ser Val Phe Asn Leu
 65           70           75           80
Ser Asn Ala Ile Val Gly Ser Gly Ile Leu Gly Leu Ser Tyr Ala Met
 85           90           95
Ala Asn Thr Gly Ile Ala Leu Phe Ile Ile Leu Leu Thr Phe Val Ser
 100          105          110
Ile Phe Ser Leu Tyr Ser Val His Leu Leu Leu Lys Thr Ala Asn Glu
 115          120          125
Gly Gly Ser Leu Leu Tyr Glu Gln Leu Gly Tyr Lys Ala Ser Gly Leu
 130          135          140
Val Gly Lys Leu
145

```

&lt;210&gt; 4731

&lt;211&gt; 2417

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4731

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780

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<210> 4732  
<211> 129  
<212> PRT  
<213> Homo sapiens

<400> 4732  
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Ser Val Ala Pro Cys Gln Pro Ala Leu Arg Glu Asp Arg Val Ser His  
20 25 30  
Ala Arg Met Ala Gly His Val Ser Val Leu Val Ser His Phe Pro Pro  
35 40 45  
Ser Val Thr Tyr Leu Gly Ile Pro Gln Gly Leu Leu Glu Cys Asp Cys  
50 55 60  
Pro Leu Pro Ser Cys Leu Gly Tyr Lys Ser Trp Pro Tyr Val Pro Ala  
65 70 75 80  
Val Arg Gly Ser Gly Asn Pro Thr Gln Pro Pro Val Leu Gly Trp Ser  
85 90 95  
Val Ser Ile His Pro Leu Val Val Ile Glu Ala Ala Leu Pro Val Leu  
100 105 110  
Gly Glu Asp Ile Trp Ala Thr Arg Ala Pro Leu Ala Pro Ser Arg Arg  
115 120 125  
Lys

<210> 4733  
<211> 543  
<212> DNA  
<213> Homo sapiens

<400> 4733  
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<210> 4734  
 <211> 181  
 <212> PRT  
 <213> Homo sapiens

<400> 4734  
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 Val Glu Gly Leu Ser Gly Arg Arg Asp Pro Leu Gly Asp Pro Thr Met  
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 Phe Phe Tyr Leu Ser Lys Lys Ile Ser Ile Pro Asn Asn Val Lys Leu  
 35 40 45  
 Gln Cys Val Ser Trp Asn Lys Glu Gln Gly Phe Ile Ala Cys Gly Gly  
 50 55 60  
 Glu Asp Gly Leu Leu Lys Val Leu Lys Leu Glu Thr Gln Thr Asp Asp  
 65 70 75 80  
 Ala Lys Leu Arg Gly Leu Ala Ala Pro Ser Asn Leu Ser Met Asn Gln  
 85 90 95  
 Thr Leu Glu Gly His Ser Gly Ser Val Gln Val Val Thr Trp Asn Glu  
 100 105 110  
 Gln Tyr Gln Lys Leu Thr Thr Ser Asp Glu Asn Gly Leu Ile Ile Val  
 115 120 125  
 Trp Met Leu Tyr Lys Gly Ser Trp Ile Glu Glu Met Ile Asn Asn Arg  
 130 135 140  
 Asn Lys Ser Val Val Arg Ser Met Ser Trp Asn Ala Asp Gly Gln Lys  
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 Ile Cys Ile Val Tyr Glu Asp Gly Ala Val Ile Val Gly Ser Val Asp  
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 Gly Asn Arg Ile Trp  
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<210> 4735  
 <211> 300  
 <212> DNA  
 <213> Homo sapiens

<400> 4735  
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 300

<210> 4736  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

<400> 4736  
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 20 25 30  
 Lys Ser Gly Ala Ala Gly Gly Ser Ala Lys Ser Ser Ser Asn Gly Pro  
 35 40 45  
 Val Ala Ser Ala Gln Tyr Val Ser Gln Ala Lys Ala Ser Ala Leu Gln  
 50 55 60  
 Gln Gln Gln Tyr Tyr Gln Trp Tyr Gln Gln Asp Asn Tyr Ala Tyr Pro  
 65 70 75 80  
 Tyr Ser Tyr Tyr Tyr Pro Met Pro Pro Gly Pro Gly Met  
 85 90

<210> 4737  
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 <212> DNA  
 <213> Homo sapiens

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1080  
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1980  
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2160  
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<210> 4738  
 <211> 756  
 <212> PRT  
 <213> Homo sapiens

<400> 4738  
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 Thr Met Trp Glu Arg Asp Val Ser Ser Asp Arg Gln Glu Pro Gly Arg  
 35 40 45  
 Arg Gly Arg Ser Trp Gly Leu Glu Gly Ser Gln Ala Leu Ser Gln Gln  
 50 55 60  
 Ala Glu Val Ile Val Arg Gln Leu Gln Glu Leu Arg Arg Leu Glu Glu  
 65 70 75 80  
 Glu Val Arg Leu Leu Arg Glu Thr Ser Leu Gln Gln Lys Met Arg Leu  
 85 90 95  
 Glu Ala Gln Ala Met Glu Leu Glu Ala Leu Ala Arg Ala Glu Lys Ala  
 100 105 110  
 Gly Arg Ala Glu Ala Glu Gly Leu Arg Ala Ala Leu Ala Gly Ala Glu  
 115 120 125  
 Val Val Arg Lys Asn Leu Glu Glu Gly Arg Gln Arg Glu Leu Glu Glu  
 130 135 140  
 Val Gln Arg Leu His Gln Glu Gln Leu Ser Ser Leu Thr Gln Ala His  
 145 150 155 160  
 Glu Glu Ala Leu Ser Ser Leu Thr Ser Lys Ala Glu Gly Leu Glu Lys  
 165 170 175  
 Ser Leu Ser Ser Leu Glu Thr Arg Arg Ala Gly Glu Ala Lys Glu Leu  
 180 185 190  
 Ala Glu Ala Gln Arg Glu Ala Glu Leu Leu Arg Lys Gln Leu Ser Lys  
 195 200 205  
 Thr Gln Glu Asp Leu Glu Ala Gln Val Thr Leu Val Glu Asn Leu Arg  
 210 215 220  
 Lys Tyr Val Gly Glu Gln Val Pro Ser Glu Val His Ser Gln Thr Trp  
 225 230 235 240  
 Glu Leu Glu Arg Gln Lys Leu Leu Glu Thr Met Gln Leu Leu Gln Glu  
 245 250 255  
 Asp Arg Asp Ser Leu His Ala Thr Ala Glu Leu Leu Gln Val Arg Val  
 260 265 270  
 Gln Ser Leu Thr His Ile Leu Ala Leu Gln Glu Glu Glu Leu Thr Arg  
 275 280 285  
 Lys Val Gln Pro Ser Asp Ser Leu Glu Pro Glu Phe Thr Arg Lys Cys  
 290 295 300  
 Gln Ser Leu Leu Asn Arg Trp Arg Glu Lys Val Phe Ala Leu Met Val  
 305 310 315 320  
 Gln Leu Lys Ala Gln Glu Leu Glu His Ser Asp Ser Val Lys Gln Leu  
 325 330 335  
 Lys Gly Gln Val Ala Ser Leu Gln Glu Lys Val Thr Ser Gln Ser Gln  
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 Glu Gln Ala Ile Leu Gln Arg Ser Leu Gln Asp Lys Ala Ala Glu Val  
 355 360 365  
 Glu Val Glu Arg Met Gly Ala Lys Gly Leu Gln Leu Glu Leu Ser Arg



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      405              410              415
Leu Glu Thr Thr Met Ala Lys Val Glu Gly Ala Ala Ala Gln Leu Pro
      420              425              430
Ser Leu Asn Asn Arg Leu Ser Tyr Ala Val Arg Lys Val His Thr Ile
      435              440              445
Arg Gly Leu Ile Ala Arg Lys Leu Ala Leu Ala Gln Leu Arg Gln Glu
      450              455              460
Ser Cys Pro Leu Pro Pro Pro Val Thr Asp Val Ser Leu Glu Leu Gln
465              470              475              480
Gln Leu Arg Glu Glu Arg Asn Arg Leu Asp Ala Glu Leu Gln Leu Ser
      485              490              495
Ala Arg Leu Ile Gln Gln Glu Val Gly Arg Ala Arg Glu Gln Gly Glu
      500              505              510
Ala Glu Arg Gln Gln Leu Ser Lys Val Ala Gln Gln Leu Glu Gln Glu
      515              520              525
Leu Gln Gln Thr Gln Glu Ser Leu Ala Ser Leu Gly Leu Gln Leu Glu
      530              535              540
Val Ala Arg Gln Gly Gln Gln Glu Ser Thr Glu Glu Ala Ala Ser Leu
545              550              555              560
Arg Gln Glu Leu Thr Gln Gln Gln Glu Leu Tyr Gly Gln Ala Leu Gln
      565              570              575
Glu Lys Val Ala Glu Val Glu Thr Arg Leu Arg Glu Gln Leu Ser Asp
      580              585              590
Thr Glu Arg Arg Leu Asn Glu Ala Arg Arg Glu His Ala Lys Ala Val
      595              600              605
Val Ser Leu Arg Gln Ile Gln Arg Arg Ala Ala Gln Glu Lys Glu Arg
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Ser Gln Glu Leu Arg Arg Leu Gln Glu Glu Ala Arg Lys Glu Glu Gly
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Gln Arg Leu Ala Arg Arg Leu Gln Glu Leu Glu Arg Asp Lys Asn Leu
      645              650              655
Met Leu Ala Thr Leu Gln Gln Glu Gly Leu Leu Ser Arg Tyr Lys Gln
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Gln Arg Leu Leu Thr Val Leu Pro Ser Leu Leu Asp Lys Lys Lys Ser
      675              680              685
Val Val Ser Ser Pro Arg Pro Pro Glu Cys Ser Ala Ser Ala Pro Val
      690              695              700
Ala Ala Ala Val Pro Thr Arg Glu Ser Ile Lys Gly Ser Leu Ser Val
705              710              715              720
Leu Leu Asp Asp Leu Gln Asp Leu Ser Glu Ala Ile Ser Lys Glu Glu
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Ala Val Cys Gln Gly Asp Asn Leu Asp Arg Cys Ser Ser Ser Asn Pro
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Gln Met Ser Ser
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&lt;210&gt; 4739

&lt;211&gt; 684

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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 tagccctctc tcctgctcct ttaaactctg aacttctagg atgggagaat gggaaactttt  
 180  
 gcagggtgag attcatagtg aaatcgggtc aagaagtgat cagatgcaaa gcacagggca  
 240  
 gttcattact ataccatggc tgaggtcttc ctgggcacca ggccttgggc tcagcacttg  
 300  
 gctcagtctg caccttggac cctgccagag cctccacag caggtgctct caggcaaggc  
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 gccagcctt gctcccagct caccacaag atgtggacag ctcttgtgct catttggatt  
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<210> 4740  
 <211> 119  
 <212> PRT  
 <213> Homo sapiens

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 Trp Leu Ser Asp Lys Asp Lys Glu Lys Ile Gln Met Ser Thr Arg Ala  
 35 40 45  
 Val His Ile Leu Trp Val Ser Trp Glu Gln Gly Trp Ala Val Pro Glu  
 50 55 60  
 Ala Pro Ser Gln Pro Ala Pro Gln Ala Ala Asn Gly Ser Leu Leu Leu  
 65 70 75 80  
 Gly Gln Gly Ile Cys Gly Gln Glu Ser Thr Leu Val Arg Arg Arg Leu  
 85 90 95  
 Ala Ser Asn Thr Gln Pro Cys Leu Arg Ala Pro Ala Val Glu Gly Ser  
 100 105 110  
 Gly Arg Val Gln Gly Ala Asp  
 115

<210> 4741  
 <211> 411  
 <212> DNA  
 <213> Homo sapiens

<400> 4741  
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 120  
 ttccgaaaaa aagaggggaa ttttttaaaa aacccgaaa gggggaagg ggggggtata  
 180  
 aaagataaaa tttgggtttt tgggggggaa aatttgga caaccacctt ggggtttttt  
 240  
 tccccacccc aaaaaatttt aaaagggggc ctaaaaaaa attttttctt taatttccaa  
 300  
 ataaaaaaaa aatgggggttc caaaatcatt gaaaaatagg ggggactcca aaaccttgaa  
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 411

<210> 4742  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 4742  
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 1 5 10 15  
 Phe Phe Leu Gly Pro Pro Phe Lys Ile Phe Trp Gly Gly Glu Lys Lys  
 20 25 30  
 Pro Glu Gly Gly Val Ser Lys Phe Ser Pro Pro Lys Asn Gln Ile Leu  
 35 40 45  
 Ser Phe Ile Pro Pro Pro Phe Pro Pro Phe Gly Phe Phe Lys Lys Phe  
 50 55 60  
 Pro Ser Phe Phe Arg Lys Gly Lys Gly Gly Glu Arg Gly Gly Gln Arg  
 65 70 75 80  
 Lys Thr Pro Phe Phe Phe Leu Arg Lys Lys Arg Glu Lys Lys Lys Lys  
 85 90 95  
 Lys Glu Arg Lys Thr Pro Val Asp Leu Arg Glu Val Asn  
 100 105

<210> 4743  
 <211> 473  
 <212> DNA  
 <213> Homo sapiens

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 120  
 gagtgattga gtcccggat ctgcagtatg aaaagaagac aacccaaaag gctcctgcag  
 180  
 gagatgggtc acagaccga gggaagatgt ctgaaggtgg aaggaaatcc agcctgctcc  
 240  
 agaaaagcaa agcagatagc agtggggtcg gaaaggtga cctgcagtcc acgttgctgg  
 300

aaggcatgg cacagctcca cctgacctgg atctctctgc tattaatgac aaaagcatcg  
 360  
 tcaaaaagac gccacagtta gcaaaaacaa tatcaaagaa acctgagtca acatcatttt  
 420  
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 473

<210> 4744  
 <211> 150  
 <212> PRT  
 <213> Homo sapiens

<400> 4744  
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 20 25 30  
 Arg Val Ile Glu Ser Arg Tyr Leu Gln Tyr Glu Lys Lys Thr Thr Gln  
 35 40 45  
 Lys Ala Pro Ala Gly Asp Gly Ser Gln Thr Arg Gly Lys Met Ser Glu  
 50 55 60  
 Gly Gly Arg Lys Ser Ser Leu Leu Gln Lys Ser Lys Ala Asp Ser Ser  
 65 70 75 80  
 Gly Val Gly Lys Gly Asp Leu Gln Ser Thr Leu Leu Glu Gly His Gly  
 85 90 95  
 Thr Ala Pro Pro Asp Leu Asp Leu Ser Ala Ile Asn Asp Lys Ser Ile  
 100 105 110  
 Val Lys Lys Thr Pro Gln Leu Ala Lys Thr Ile Ser Lys Lys Pro Glu  
 115 120 125  
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 130 135 140  
 Ala Asn Gly Met Met Glu  
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<210> 4745  
 <211> 666  
 <212> DNA  
 <213> Homo sapiens

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 180  
 caaagaggta ctacagaaat aggtatgata ggatcaaagc ctttctcaac agttaagtac  
 240  
 aaaaatgagg gtccagatta tagactctac aagagtgaac cagagttaac aacagtggca  
 300  
 gaagttgatg aatctaattg agaagaaaaa tcagaacctg tttcagagat agaaacttca  
 360  
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 420

cccgaaatctt cgacaatagc ttcctatgta accttgagga aaactaagaa gatgatggat  
 480  
 ctaagaacgg aaagaccaag aagtgcagtg gaacagctct gtttggtga aagtactcga  
 540  
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 666

<210> 4746  
 <211> 221  
 <212> PRT  
 <213> Homo sapiens

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 Ser Ala Gly Ile Gln Arg Ala Gln Ile Gln Lys Glu Leu Trp Arg Ile  
 35 40 45  
 Gln Asp Val Met Glu Gly Leu Ser Lys His Lys Gln Gln Arg Gly Thr  
 50 55 60  
 Thr Glu Ile Gly Met Ile Gly Ser Lys Pro Phe Ser Thr Val Lys Tyr  
 65 70 75 80  
 Lys Asn Glu Gly Pro Asp Tyr Arg Leu Tyr Lys Ser Glu Pro Glu Leu  
 85 90 95  
 Thr Thr Val Ala Glu Val Asp Glu Ser Asn Gly Glu Glu Lys Ser Glu  
 100 105 110  
 Pro Val Ser Glu Ile Glu Thr Ser Val Val Lys Gly Ser His Phe Pro  
 115 120 125  
 Val Gly Val Val Pro Pro Arg Ala Lys Ser Pro Thr Pro Glu Ser Ser  
 130 135 140  
 Thr Ile Ala Ser Tyr Val Thr Leu Arg Lys Thr Lys Lys Met Met Asp  
 145 150 155 160  
 Leu Arg Thr Glu Arg Pro Arg Ser Ala Val Glu Gln Leu Cys Leu Ala  
 165 170 175  
 Glu Ser Thr Arg Pro Arg Met Thr Val Glu Glu Gln Met Glu Arg Ile  
 180 185 190  
 Arg Arg Tyr Gln Gln Ala Cys Leu Arg Glu Lys Lys Lys Gly Leu Asn  
 195 200 205  
 Val Ile Gly Ala Ser Asp Gln Ser Pro Leu Gln Ser Pro  
 210 215 220

<210> 4747  
 <211> 1091  
 <212> DNA  
 <213> Homo sapiens

<400> 4747  
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&lt;210&gt; 4748

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4748

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Met	Glu	Glu	Glu	Thr	His	Thr	Asp	Ala	Lys	Ile	Arg	Ala	Glu	Asn	Gly
		20						25					30		
Thr	Gly	Ser	Ser	Pro	Arg	Gly	Pro	Gly	Cys	Ser	Leu	Arg	His	Phe	Ala
		35					40				45				
Cys	Glu	Gln	Asn	Leu	Leu	Ser	Arg	Pro	Asp	Gly	Ser	Ala	Ser	Phe	Leu
	50					55				60					
Gln	Gly	Asp	Thr	Ser	Val	Leu	Ala	Gly	Val	Tyr	Gly	Pro	Ala	Glu	Val
65					70					75				80	
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<211> 2196
<212> DNA
<213> Homo sapiens
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3923

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780  
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840  
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960  
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1080  
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1140  
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1320  
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2196

&lt;210&gt; 4750



<211> 276  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Val Leu Ala Val Leu Leu Thr Leu Val Phe Trp Lys Leu Ile Arg Ser  
 50 55 60  
 Arg Arg Ser Ser Gln Arg Ala Val Leu Leu Val Gly Leu Cys Asp Ser  
 65 70 75 80  
 Gly Lys Thr Leu Leu Phe Val Arg Leu Leu Thr Gly Leu Tyr Arg Asp  
 85 90 95  
 Thr Gln Thr Ser Ile Thr Asp Ser Cys Ala Val Tyr Arg Val Asn Asn  
 100 105 110  
 Asn Arg Gly Asn Ser Leu Thr Leu Ile Asp Leu Pro Gly His Glu Ser  
 115 120 125  
 Leu Arg Leu Gln Phe Leu Glu Arg Phe Lys Ser Ser Ala Arg Ala Ile  
 130 135 140  
 Val Phe Val Val Asp Ser Ala Ala Phe Gln Arg Glu Val Lys Asp Val  
 145 150 155 160  
 Ala Glu Phe Leu Tyr Gln Val Leu Ile Asp Ser Met Gly Leu Lys Asn  
 165 170 175  
 Thr Pro Ser Phe Leu Ile Ala Cys Asn Lys Gln Asp Ile Ala Met Ala  
 180 185 190  
 Lys Ser Ala Lys Leu Ile Gln Gln Gln Leu Glu Lys Glu Leu Asn Thr  
 195 200 205  
 Leu Arg Val Thr Arg Ser Ala Ala Pro Ser Thr Leu Asp Ser Ser Ser  
 210 215 220  
 Thr Ala Pro Ala Gln Leu Gly Lys Lys Gly Lys Glu Phe Glu Phe Ser  
 225 230 235 240  
 Gln Leu Pro Leu Lys Val Glu Phe Leu Glu Cys Ser Ala Lys Gly Gly  
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 Arg Gly Asp Val Gly Ser Ala Asp Ile Gln Asp Leu Glu Lys Trp Leu  
 260 265 270  
 Ala Lys Ile Ala  
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<210> 4751  
 <211> 2777  
 <212> DNA  
 <213> Homo sapiens

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 180

gcaccacctc ccatgctcgc agctcctcag cttatccaga ggcccgatcat gctgaccaag  
240  
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600  
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660  
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&lt;211&gt; 2093

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4755

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 Ile Met Arg Leu Leu Gln Val Leu Val Pro Gln Val Glu Lys Ile Cys  
 100 105 110  
 Ile Asp Lys Gly Leu Thr Asp Glu Ser Glu Ile Leu Arg Phe Leu Gln  
 115 120 125  
 His Gly Thr Leu Val Gly Leu Leu Pro Val Pro His Pro Ile Leu Ile  
 130 135 140  
 Arg Lys Tyr Gln Ala Asn Ser Gly Thr Ala Met Trp Phe Arg Thr Tyr  
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<210> 4757  
 <211> 272  
 <212> DNA  
 <213> Homo sapiens

<400> 4757  
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 gacgtattcg tcttttcccta ctcttgccaa gagggagaaa ccaaggagct ggtcatcagg  
 180  
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<210> 4758

<211> 90

<212> PRT

<213> Homo sapiens

<400> 4758

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Leu	Glu	Ala	Pro	Ala	Ser	Gly	Leu	Ala	Phe	His	Pro	Ala	Arg	Asp	Leu
			20				25						30		
Leu	Ala	Ala	Gly	Asp	Val	Asp	Gly	Asp	Val	Phe	Val	Phe	Ser	Tyr	Ser
		35					40					45			
Cys	Gln	Glu	Gly	Glu	Thr	Lys	Glu	Leu	Val	Ile	Arg	Ser	His	Leu	Lys
	50					55				60					
Ala	Cys	Arg	Ala	Val	Ala	Phe	Ser	Glu	Asp	Gly	Gln	Lys	Leu	Ile	Thr
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<210> 4759

<211> 1087

<212> DNA

<213> Homo sapiens

<400> 4759

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 600

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<210> 4760

<211> 78

<212> PRT

<213> Homo sapiens

<400> 4760

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Thr	Thr	Ala	Ala	Thr	Val	Ser	Val	Pro	Gln	Asp	Gly	Cys	Arg	Leu	Arg
		20						25					30		
Lys	Gly	Gln	Thr	Lys	Thr	Leu	Phe	Glu	Phe	Ser	Ser	Ser	Arg	Ala	Gly
		35					40					45			
Phe	Leu	Pro	Leu	Trp	Asp	Val	Ala	Ala	Thr	Asp	Phe	Gly	Gln	Thr	Asn
	50					55					60				
Gln	Lys	Phe	Gly	Phe	Glu	Leu	Gly	Pro	Val	Cys	Phe	Ser	Ser		
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<210> 4761

<211> 3973

<212> DNA

<213> Homo sapiens

<400> 4761

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<210> 4762

<211> 251

<212> PRT

<213> Homo sapiens

<400> 4762

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			20					25					30		
Lys	Gly	Trp	Pro	Pro	Lys	Tyr	Ser	Thr	Trp	Glu	Pro	Glu	Glu	His	Ile
		35					40					45			
Leu	Asp	Pro	Arg	Leu	Val	Met	Ala	Tyr	Glu	Glu	Lys	Glu	Glu	Arg	Asp
	50					55					60				
Arg	Ala	Ser	Gly	Tyr	Arg	Lys	Arg	Gly	Pro	Lys	Pro	Lys	Arg	Leu	Leu
65					70					75				80	
Leu	Gln	Arg	Leu	Tyr	Ser	Met	Asp	Leu	Arg	Ser	Ser	His	Lys	Ala	Lys
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Gly	Lys	Glu	Lys	Leu	Cys	Phe	Ser	Leu	Thr	Cys	Pro	Leu	Gly	Ser	Gly
			100					105					110		
Ser	Pro	Glu	Gly	Val	Val	Lys	Ala	Gly	Ala	Pro	Glu	Leu	Val	Asp	Lys
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Gly	Pro	Leu	Val	Pro	Thr	Leu	Pro	Phe	Pro	Leu	Arg	Lys	Pro	Arg	Lys
		130				135					140				
Ala	His	Lys	Tyr	Leu	Arg	Leu	Ser	Arg	Lys	Lys	Phe	Pro	Pro	Arg	Gly
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Pro	Asn	Leu	Glu	Ser	His	Ser	His	Arg	Arg	Glu	Leu	Phe	Leu	Gln	Glu
			165					170						175	
Pro	Pro	Ala	Pro	Asp	Val	Leu	Gln	Ala	Ala	Gly	Glu	Trp	Glu	Pro	Ala
		180					185						190		
Ala	Gln	Pro	Pro	Glu	Glu	Glu	Ala	Asp	Ala	Asp	Leu	Ala	Glu	Gly	Pro
		195					200				205				
Pro	Pro	Trp	Thr	Pro	Ala	Leu	Pro	Ser	Ser	Glu	Val	Thr	Val	Thr	Asp
		210				215					220				
Ile	Thr	Ala	Asn	Ser	Ile	Thr	Val	Thr	Phe	Arg	Glu	Ala	Gln	Ala	Ala
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<210> 4763  
<211> 2158  
<212> DNA  
<213> Homo sapiens

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180  
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240  
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<210> 4764

<211> 719

<212> PRT

<213> Homo sapiens

<400> 4764

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			20					25					30		
Leu	Lys	Lys	Arg	Glu	Ile	Lys	Leu	Ser	Asp	Asp	Phe	Asp	Ser	Pro	Val
		35					40				45				
Lys	Gly	Pro	Leu	Cys	Lys	Ser	Val	Thr	Pro	Thr	Lys	Glu	Phe	Leu	Lys
	50					55					60				
Asp	Glu	Ile	Lys	Gln	Glu	Glu	Glu	Thr	Cys	Lys	Arg	Ile	Ser	Thr	Ile
65				70					75					80	
Thr	Ala	Leu	Gly	His	Glu	Gly	Lys	Gln	Leu	Val	Asn	Gly	Glu	Val	Ser
			85					90					95		
Asp	Glu	Arg	Val	Ala	Pro	Asn	Phe	Lys	Thr	Glu	Pro	Ile	Glu	Thr	Lys
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Phe	Tyr	Glu	Thr	Lys	Glu	Glu	Ser	Tyr	Ser	Pro	Ser	Lys	Asp	Arg	Asn
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Ser	Met	Lys	Thr	Gly	Glu	Leu	Glu	Lys	Glu	Thr	Ala	Pro	Leu	Arg	Lys
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			165					170					175		
Gln	Ile	Glu	Glu	Pro	Asp	Pro	Pro	Glu	Met	Glu	Thr	Ser	Leu	Asp	Ser

180							185					190				
Ser	Glu	Met	Ala	Lys	Asp	Leu	Ser	Ser	Lys	Thr	Ala	Leu	Ser	Ser	Thr	
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Lys	Lys	Thr	Phe	Leu	Asp	Lys	Asp	Ala	Gln	Arg	Leu	Ser	Pro	Ile	Pro	
				245					250					255		
Glu	Glu	Val	Pro	Lys	Ser	Thr	Leu	Glu	Ser	Glu	Lys	Pro	Gly	Ser	Pro	
			260					265					270			
Glu	Ala	Ala	Glu	Thr	Ser	Pro	Pro	Ser	Asn	Ile	Ile	Asp	His	Cys	Glu	
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Lys	Leu	Ala	Ser	Glu	Lys	Glu	Val	Val	Glu	Cys	Gln	Ser	Thr	Ser	Thr	
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Val	Gly	Gly	Gln	Ser	Val	Lys	Lys	Val	Asp	Leu	Glu	Thr	Leu	Lys	Glu	
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Asp	Ser	Glu	Phe	Thr	Lys	Val	Glu	Met	Asp	Asn	Leu	Asp	Asn	Ala	Gln	
				325					330					335		
Thr	Ser	Gly	Ile	Glu	Glu	Pro	Ser	Glu	Thr	Lys	Gly	Ser	Met	Gln	Lys	
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Lys	Thr	Asn	Val	Gly	Arg	Thr	Leu	Arg	Arg	Ser	Pro	Arg	Ile	Ser	Arg	
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Pro	Thr	Ala	Lys	Val	Ala	Glu	Ile	Arg	Asp	Gln	Lys	Ala	Asp	Lys	Lys	
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Arg	Gly	Glu	Gly	Glu	Asp	Glu	Val	Glu	Glu	Glu	Ser	Thr	Ala	Leu	Gln	
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Ser	Lys	Val	Ser	Lys	Val	Lys	Pro	Xaa	Lys	Ala	Lys	Phe	Asp	Gly	Leu	
				485					490					495		
Val	Leu	Gly	His	Val	Ala	Asp	Gly	Asn	Ile	Pro	Ala	Met	Met	Lys	Val	
			500					505					510			
Lys	Gly	Leu	Ala	Val	Lys	Asn	His	Leu	Gln	Leu	Gln	Lys	Arg	Arg	Lys	

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 Gly Ile Ser Ile Glu Asn Ile Ile Pro Pro Gln Glu Pro Asp Phe Ser  
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 Glu Asp Gln Glu Glu Lys Lys Lys Asp Ser Lys Lys Ser Lys Ala Asn  
 645 650 655  
 Leu Leu Glu Arg Arg Ser Thr Arg Thr Arg Lys Cys Ile Ser Tyr Arg  
 660 665 670  
 Phe Asp Glu Phe Asp Glu Ala Ile Asp Glu Ala Ile Glu Asp Asp Ile  
 675 680 685  
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&lt;210&gt; 4765

&lt;211&gt; 1707

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4765

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&lt;210&gt; 4766

&lt;211&gt; 280

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4766

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 20 25 30  
 Pro Glu Pro Arg Arg Thr Glu His Arg Ala Pro Ser Ser Thr Trp Arg  
 35 40 45  
 Pro Val Ala Leu Thr Leu Leu Thr Leu Cys Leu Val Leu Leu Ile Gly  
 50 55 60  
 Leu Ala Ala Leu Gly Leu Leu Phe Phe Gln Tyr Tyr Gln Leu Ser Asn  
 65 70 75 80  
 Thr Gly Gln Asp Thr Ile Ser Gln Met Glu Glu Arg Leu Gly Asn Thr  
 85 90 95  
 Ser Gln Glu Leu Gln Ser Leu Gln Val Gln Asn Ile Lys Leu Ala Gly  
 100 105 110  
 Ser Leu Gln His Val Ala Glu Lys Leu Cys Arg Glu Leu Tyr Asn Lys  
 115 120 125  
 Ala Gly Ala His Arg Cys Ser Pro Cys Thr Glu Gln Trp Lys Trp His  
 130 135 140  
 Gly Asp Asn Cys Tyr Gln Phe Tyr Lys Asp Ser Lys Ser Trp Glu Asp  
 145 150 155 160  
 Cys Lys Tyr Phe Cys Leu Ser Glu Asn Ser Thr Met Leu Lys Ile Asn  
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<211> 460
<212> PRT
<213> Homo sapiens
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3947

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 305                      310                      315                      320  
 Leu Gln Ile Lys His Ala Val Thr Glu Ala Glu Ile Gln Gln Leu Lys  
 325                      330                      335  
 Arg Lys Leu Gln Ser Leu Glu Gln Glu Lys Gly Arg Trp Arg Val Glu  
 340                      345                      350  
 Lys Ala Gln Leu Glu Gln Ser Val Glu Glu Asn Lys Glu Arg Met Glu  
 355                      360                      365  
 Lys Leu Glu Gly Tyr Trp Gly Glu Ala Gln Ser Leu Cys Gln Ala Val  
 370                      375                      380  
 Asp Glu His Leu Arg Glu Thr Gln Ala Gln Tyr Gln Ala Leu Glu Arg  
 385                      390                      395                      400  
 Lys Tyr Ser Lys Ala Lys Arg Leu Ile Lys Asp Tyr Gln Gln Lys Glu  
 405                      410                      415  
 Ile Glu Phe Leu Lys Lys Glu Thr Ala Gln Arg Arg Val Leu Glu Glu  
 420                      425                      430  
 Ser Glu Leu Ala Arg Lys Glu Glu Met Asp Lys Leu Leu Asp Lys Ile  
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 <213> Homo sapiens

<400> 4769  
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 240  
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&lt;210&gt; 4770

&lt;211&gt; 237

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4770

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			20					25					30		
Leu	Ser	Val	Leu	Thr	Glu	Cys	Ala	Arg	Met	His	Arg	Pro	Ala	Arg	Lys
		35					40					45			
Phe	Leu	Lys	Ala	Gln	Val	Leu	Pro	Pro	Leu	Arg	Asp	Val	Arg	Thr	Arg
	50					55				60					
Pro	Glu	Val	Gly	Asp	Leu	Leu	Arg	Asn	Lys	Leu	Val	Arg	Leu	Met	Thr
	65			70					75					80	
His	Leu	Asp	Thr	Asp	Val	Lys	Arg	Val	Ala	Ala	Glu	Phe	Leu	Phe	Val
			85					90						95	
Leu	Cys	Ser	Glu	Ser	Val	Pro	Arg	Phe	Ile	Lys	Tyr	Thr	Gly	Tyr	Gly
			100					105					110		
Asn	Ala	Ala	Gly	Leu	Leu	Ala	Ala	Arg	Gly	Leu	Met	Ala	Gly	Gly	Arg
		115					120					125			
Pro	Glu	Gly	Gln	Tyr	Ser	Glu	Asp	Glu	Asp	Thr	Asp	Thr	Asp	Glu	Tyr
	130					135					140				
Lys	Glu	Ala	Lys	Ala	Ser	Ile	Asn	Pro	Val	Thr	Gly	Arg	Val	Glu	Glu

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				165				170							175
Glu	Ala	Met	Lys	Leu	Val	Thr	Met	Phe	Asp	Lys	Leu	Ser	Ser	Pro	Thr
			180					185					190		
Ala	Pro	Phe	Pro	Asn	Arg	Asn	Arg	Val	Ile	Gln	Pro	Met	Gly	Met	Ser
		195					200					205			
Pro	Arg	Gly	His	Leu	Thr	Ser	Leu	Gln	Asp	Ala	Met	Cys	Glu	Thr	Met
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225					230					235					

&lt;210&gt; 4771

&lt;211&gt; 2653

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4771

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 <212> PRT  
 <213> Homo sapiens

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 Ile Lys Gln Arg Asp Lys Arg Leu Glu Trp Glu Met Met Cys Arg Val  
 35 40 45  
 Lys Pro Asp Val Val Gln Asp Lys Glu Thr Glu Arg Asn Leu Gln Arg  
 50 55 60  
 Ile Ala Thr Arg Gly Val Val Gln Leu Phe Asn Ala Val Gln Lys His  
 65 70 75 80  
 Gln Lys Asn Val Asp Glu Lys Val Lys Glu Ala Gly Ser Ser Met Arg  
 85 90 95  
 Lys Arg Ala Lys Leu Ile Ser Thr Val Ser Lys Lys Asp Phe Ile Ser  
 100 105 110  
 Val Leu Arg Gly Met Asp Gly Ser Thr Asn Glu Thr Ala Ser Ser Arg  
 115 120 125  
 Lys Lys Pro Lys Ala Lys Gln Thr Glu Val Lys Ser Glu Glu Gly Pro  
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 Gly Trp Thr Ile Leu Arg Asp Asp Phe Met Met Gly Ala Ser Met Lys  
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 Ala Ser Asp Ser Asp Thr  
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<210> 4774  
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 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4774

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Pro Asn Pro Ser Ser Leu Phe Pro Pro Ser Pro Gln Ala Arg Ala Ala
        35           40           45
Met Gly Trp Arg Val Leu Ala Trp Thr Gln His Pro Ile Ser Ser Ala
        50           55           60
Leu Ser Leu Asp Pro Ala Ser His Leu Leu Ser Ser Gln Gly Gly Gly
65           70           75           80
Ser Trp Glu Pro His Pro Gln Pro Leu His Ala
          85           90

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&lt;210&gt; 4775

&lt;211&gt; 433

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4775

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433

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&lt;210&gt; 4776

&lt;211&gt; 97

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4776

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          20           25           30
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        35           40           45
Thr Ala Thr Ser Leu Pro Leu His Leu Leu Ser Leu Leu Leu Thr
        50           55           60
Ile His Ala Ala His Pro Val Thr Ser Phe Gln Phe Leu Leu Thr Phe

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 <211> 2200  
 <212> DNA  
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<211> 144

<212> PRT

<213> Homo sapiens

<400> 4778

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&lt;400&gt; 4779

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&lt;211&gt; 1241

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4780

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 <213> Homo sapiens

<400> 4782  
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 Ser Glu Lys His Gln Gly Lys Ala Ala Thr Thr Ala Lys Thr Leu Ile  
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 Pro Lys Ser Gln His Arg Met Leu Ala Pro Thr Gly Ala Val Ser Thr  
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&lt;210&gt; 4784

&lt;211&gt; 212

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4784

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		20					25					30			
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		35				40					45				
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	50					55				60					
Cys	Ser	Asn	Ile	Thr	Asn	Thr	Gly	Leu	Leu	Leu	Ile	Ala	Trp	Gly	Leu
65				70				75				80			
Gln	Arg	Leu	Lys	Ser	Leu	Asn	Leu	Arg	Ser	Cys	Arg	His	Leu	Ser	Asp
		85					90					95			
Val	Gly	Ile	Gly	His	Leu	Ala	Gly	Met	Thr	Arg	Ser	Ala	Ala	Glu	Gly
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Leu Ser His Met Gly Ser Leu Arg Ser Leu Asn Leu Arg Ser Cys Asp
      165      170      175
Asn Ile Ser Asp Thr Gly Ile Met His Leu Ala Met Gly Ser Leu Arg
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Leu Ser Gly Leu Asp Val Ser Phe Cys Asp Lys Val Gly Asp Gln Ser
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Leu Ala Tyr Ile
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&lt;210&gt; 4785

&lt;211&gt; 3289

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4785

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<211> 322

<212> PRT

<213> Homo sapiens

<400> 4786

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		35					40					45			
Ser	Leu	Arg	Gly	Lys	Ala	Val	Val	Leu	Met	Gly	Lys	Asn	Thr	Met	Met
		50				55					60				
Arg	Lys	Ala	Ile	Arg	Gly	His	Leu	Glu	Asn	Asn	Pro	Ala	Leu	Glu	Lys
65					70				75					80	
Leu	Leu	Pro	His	Ile	Arg	Gly	Asn	Val	Gly	Phe	Val	Phe	Thr	Lys	Glu
			85					90					95		
Asp	Leu	Thr	Glu	Ile	Arg	Asp	Met	Leu	Leu	Ala	Asn	Lys	Val	Pro	Ala
			100					105					110		
Ala	Ala	Arg	Ala	Gly	Ala	Ile	Ala	Pro	Cys	Glu	Val	Thr	Val	Pro	Ala
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<210> 4787

<211> 1258

<212> DNA

<213> Homo sapiens

<400> 4787

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<210> 4788

<211> 197

<212> PRT

<213> Homo sapiens

<400> 4788

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Pro	Gly	Pro	Ser	Ser	Ser	Ile	Gly	Ser	Pro	Gln	Ala	Ser	Ser	Pro	Pro	35	40	45	
Arg	Pro	Asn	His	Tyr	Leu	Leu	Ile	Asp	Thr	Gln	Gly	Val	Pro	Tyr	Thr	50	55	60	
Val	Leu	Val	Asp	Glu	Glu	Ser	Gln	Arg	Glu	Pro	Gly	Ala	Ser	Gly	Ala	65	70	75	80
Pro	Gly	Gln	Lys	Lys	Cys	Tyr	Ser	Cys	Pro	Val	Cys	Ser	Arg	Val	Phe	85	90	95	
Glu	Tyr	Met	Ser	Tyr	Leu	Gln	Arg	His	Ser	Ile	Thr	His	Ser	Glu	Val	100	105	110	
Lys	Pro	Phe	Glu	Cys	Asp	Ile	Cys	Gly	Lys	Ala	Phe	Lys	Arg	Ala	Ser	115	120	125	
His	Leu	Ala	Arg	His	His	Ser	Ile	His	Leu	Ala	Gly	Gly	Gly	Arg	Pro	130	135	140	
His	Gly	Cys	Pro	Leu	Cys	Pro	Arg	Arg	Phe	Arg	Asp	Ala	Gly	Glu	Leu	145	150	155	160
Ala	Gln	His	Ser	Arg	Val	His	Ser	Gly	Glu	Arg	Pro	Phe	Gln	Cys	Pro	165	170	175	
His	Cys	Pro	Arg	Arg	Phe	Met	Glu	Gln	Asn	Thr	Leu	Gln	Lys	His	Thr	180	185	190	
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<210> 4789

<211> 1515

<212> DNA

<213> Homo sapiens

<400> 4789

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&lt;210&gt; 4790

&lt;211&gt; 241

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4790

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Thr Phe Glu Leu Phe Leu Thr Ile Ile Asp Gly Pro Ala Asn Tyr Asn
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Val Asp Leu Pro Phe Met Tyr Ser Ile Thr Tyr Ala Ala Phe Ala Ile
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Lys Asp Ser Val Glu Lys Leu Glu Leu Gly Cys Pro Phe Ser Pro His
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      195          200          205
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Ile

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&lt;210&gt; 4791

&lt;211&gt; 4481

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4791

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&lt;210&gt; 4792

&lt;211&gt; 179

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4792

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&lt;210&gt; 4793

&lt;211&gt; 1242

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4793

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&lt;210&gt; 4796

&lt;211&gt; 541

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4796

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&lt;211&gt; 2848

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4797

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2400  
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2460  
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2520

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 2700  
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 2760  
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<210> 4798

<211> 401

<212> PRT

<213> Homo sapiens

<400> 4798

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Phe	Met	Tyr	Ile	Arg	Tyr	Thr	Gln	Pro	Pro	Thr	Asp	Leu	Trp	Asp	Trp
			20					25					30		
Phe	Glu	Ser	Phe	Leu	Asp	Asp	Glu	Glu	Asp	Leu	Asp	Val	Lys	Ala	Gly
		35					40					45			
Gly	Gly	Cys	Val	Met	Thr	Ile	Gly	Glu	Met	Leu	Arg	Ser	Phe	Leu	Thr
	50					55					60				
Lys	Leu	Glu	Trp	Phe	Ser	Thr	Leu	Phe	Pro	Arg	Ile	Pro	Val	Pro	Val
65					70					75					80
Gln	Lys	Asn	Ile	Asp	Gln	Gln	Ile	Lys	Thr	Arg	Pro	Arg	Lys	Ile	Lys
				85					90					95	
Lys	Asp	Gly	Lys	Glu	Gly	Ala	Glu	Glu	Ile	Asp	Arg	His	Val	Glu	Arg
			100					105					110		
Arg	Arg	Ser	Arg	Ser	Pro	Arg	Arg	Ser	Leu	Ser	Pro	Arg	Arg	Ser	Pro
		115					120					125			
Arg	Arg	Ser	Arg	Ser	Arg	Ser	His	His	Arg	Glu	Gly	His	Gly	Ser	Ser
		130				135					140				
Ser	Phe	Asp	Arg	Glu	Leu	Glu	Arg	Glu	Lys	Glu	Arg	Gln	Arg	Leu	Glu
145					150					155					160
Arg	Glu	Ala	Lys	Glu	Arg	Glu	Lys	Glu	Arg	Arg	Arg	Ser	Arg	Ser	Ile
			165					170						175	
Asp	Arg	Gly	Leu	Glu	Arg	Arg	Arg	Ser	Arg	Ser	Arg	Glu	Arg	His	Arg
			180					185					190		
Ser	Arg	Ser	Arg	Ser	Arg	Asp	Arg	Lys	Gly	Asp	Arg	Arg	Asp	Arg	Asp
		195					200					205			
Arg	Glu	Arg	Glu	Lys	Glu	Asn	Glu	Arg	Gly	Arg	Arg	Arg	Asp	Arg	Asp
		210				215						220			
Tyr	Asp	Lys	Glu	Arg	Gly	Asn	Glu	Arg	Glu	Lys	Glu	Arg	Glu	Arg	Ser
225					230					235					240
Arg	Glu	Arg	Ser	Lys	Glu	Gln	Arg	Ser	Arg	Gly	Glu	Val	Glu	Glu	Lys
			245						250					255	
Lys	His	Lys	Glu	Asp	Lys	Asp	Asp	Arg	Arg	His	Arg	Asp	Asp	Lys	Arg
		260						265					270		
Asp	Ser	Lys	Lys	Glu	Lys	Lys	His	Ser	Arg	Ser	Arg	Ser	Arg	Glu	Arg



275                      280                      285  
 Lys His Arg Ser Arg Ser Arg Ser Arg Asn Ala Gly Lys Arg Ser Arg  
 290                      295                      300  
 Ser Arg Ser Lys Glu Lys Ser Ser Lys His Lys Asn Glu Ser Lys Glu  
 305                      310                      315                      320  
 Lys Ser Asn Lys Arg Ser Arg Ser Gly Ser Gln Gly Arg Thr Asp Ser  
 325                      330                      335  
 Val Glu Lys Ser Lys Lys Arg Glu His Ser Pro Ser Lys Glu Lys Ser  
 340                      345                      350  
 Arg Lys Arg Ser Arg Ser Lys Glu Arg Ser His Lys Arg Asp His Ser  
 355                      360                      365  
 Asp Ser Lys Asp Gln Ser Asp Lys His Asp Arg Arg Arg Ser Gln Ser  
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<210> 4799

<211> 358

<212> DNA

<213> Homo sapiens

<400> 4799

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 180  
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 240  
 aggccctttt ggtgggtcca tgagtctggt tactacagcc aggtccagc ccaggttcac  
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<210> 4800

<211> 119

<212> PRT

<213> Homo sapiens

<400> 4800

Ala Ser Leu Ala Gly Glu Arg Val Ala Leu Asp His Leu Ser Gly Arg  
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 Ser Gln Asp Pro Leu Ser Val Leu Leu Pro Arg Gly Leu Leu Arg Leu  
 20                      25                      30  
 Pro Pro Cys Gly His Arg Gly Ala Leu Asp Gln Pro His His Arg Val  
 35                      40                      45  
 Ala Gln Pro His Leu Gln Val Arg Gln Arg Ser Pro Pro Ala Ser  
 50                      55                      60  
 Trp Ser Pro Pro Pro Arg Ala Leu Ser His Val Phe Leu Phe Gly Asp  
 65                      70                      75                      80  
 Arg Pro Phe Trp Trp Val His Glu Ser Gly Tyr Tyr Ser Gln Ala Pro

	85		90		95										
Ala	Gln	Val	His	Gln	Phe	Pro	Ser	Ser	Cys	Glu	Thr	Gly	Pro	Gly	Ser
	100							105					110		
Pro	Ser	Gly	His	Cys	Met	Ile									
	115														

&lt;210&gt; 4801

&lt;211&gt; 1447

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4801

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 120  
 atagccgagg cgctacagaa ccagctagcc tggctggaga acgtgtggct ctggatcacc  
 180  
 tttctgggcg atcccaagat cctctttctg ttctacttcc ccgcggccta ctacgcctcc  
 240  
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 300  
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 420  
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 780  
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 1080  
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 1260

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 1447

<210> 4802

<211> 377

<212> PRT

<213> Homo sapiens

<400> 4802

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		20					25						30		
Ser	Thr	Leu	Gly	Ala	Gly	Ile	Val	Ile	Ala	Glu	Ala	Leu	Gln	Asn	Gln
	35					40						45			
Leu	Ala	Trp	Leu	Glu	Asn	Val	Trp	Leu	Trp	Ile	Thr	Phe	Leu	Gly	Asp
	50				55					60					
Pro	Lys	Ile	Leu	Phe	Leu	Phe	Tyr	Phe	Pro	Ala	Ala	Tyr	Tyr	Ala	Ser
65				70				75						80	
Arg	Arg	Val	Gly	Ile	Ala	Val	Leu	Trp	Ile	Ser	Leu	Ile	Thr	Glu	Trp
			85					90					95		
Leu	Asn	Leu	Ile	Phe	Lys	Trp	Phe	Leu	Phe	Gly	Asp	Arg	Pro	Phe	Trp
		100					105					110			
Trp	Val	His	Glu	Ser	Gly	Tyr	Tyr	Ser	Gln	Ala	Pro	Ala	Gln	Val	His
	115					120						125			
Gln	Phe	Pro	Ser	Ser	Cys	Glu	Thr	Gly	Pro	Gly	Ser	Pro	Ser	Gly	His
	130				135						140				
Cys	Met	Ile	Thr	Gly	Ala	Ala	Leu	Trp	Pro	Ile	Met	Thr	Ala	Leu	Ser
145				150					155					160	
Ser	Gln	Val	Ala	Thr	Arg	Ala	Arg	Ser	Arg	Trp	Val	Arg	Val	Met	Pro
			165					170						175	
Ser	Leu	Ala	Tyr	Cys	Thr	Phe	Leu	Leu	Ala	Val	Gly	Leu	Ser	Arg	Ile
		180					185					190			
Phe	Ile	Leu	Ala	His	Phe	Pro	His	Gln	Val	Leu	Ala	Gly	Leu	Ile	Thr
	195					200						205			
Gly	Ala	Val	Leu	Gly	Trp	Leu	Met	Thr	Xaa	Pro	Glu	Cys	Leu	Trp	Ser
	210				215						220				
Gly	Ser	Xaa	Ser	Phe	Tyr	Gly	Leu	Thr	Ala	Leu	Ala	Leu	Met	Leu	Gly
225				230					235					240	
Thr	Ser	Leu	Ile	Tyr	Trp	Thr	Leu	Phe	Thr	Leu	Gly	Leu	Asp	Leu	Ser
			245					250						255	
Trp	Ser	Ile	Ser	Leu	Ala	Phe	Lys	Trp	Cys	Glu	Arg	Pro	Glu	Trp	Ile
		260					265						270		
His	Val	Asp	Ser	Arg	Pro	Phe	Ala	Ser	Leu	Ser	Arg	Asp	Ser	Gly	Ala
		275				280						285			
Ala	Leu	Gly	Leu	Gly	Ile	Ala	Leu	His	Ser	Pro	Cys	Tyr	Ala	Gln	Val
	290				295						300				
Arg	Arg	Ala	Gln	Leu	Gly	Asn	Gly	Gln	Lys	Ile	Ala	Cys	Leu	Val	Leu

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305          310          315          320
Ala Met Gly Leu Leu Gly Pro Leu Asp Trp Leu Gly His Pro Pro Gln
          325          330          335
Ile Ser Leu Phe Tyr Ile Phe Asn Phe Leu Lys Tyr Thr Leu Trp Pro
          340          345          350
Cys Leu Val Leu Ala Leu Val Pro Trp Ala Val His Met Phe Ser Ala
          355          360          365
Gln Glu Ala Pro Pro Ile His Ser Ser
          370          375

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<210> 4803  
 <211> 564  
 <212> DNA  
 <213> Homo sapiens

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120
ccaaaacctg ctaatgcctg atttccatta cgtgctactc ctcaaattggc agcggcttct
180
gaatattaca gagatgggtg gctgtttgct tttctctttt gttgtagcat aaaactgttc
240
attttagctt agtgacattt gtcaagaata gcaacctttt tgcttccaag ggacttgaag
300
gaagttaaatt ttagatgctt tcctctcttc ttattttgtg gaggtatttc ctgttcagta
360
gcaaatacgt tatagaatat attagcattg ttatatatta aactaatgac taatcatttc
420
agctttattc atactgttgc attttatatt tcacagggag caatagaaaa agtgaaagaa
480
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540
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564

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<210> 4804  
 <211> 53  
 <212> PRT  
 <213> Homo sapiens

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<400> 4804
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Gln Gly Ala Ile Glu Lys Val Lys Glu Ser Asp Lys Leu Val Ala Thr
20          25          30
Ser Lys Ile Thr Leu Gln Asp Lys Gln Asn Met Val Lys Arg Val Ser
35          40          45
Ile Met Ser Tyr Ala
50

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<210> 4805  
 <211> 1619

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4805

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120  
aaatccatgc agaaaaaact tcggagtaat tggaagattc agagcttaaa agatgaaatc  
180  
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240  
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300  
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360  
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420  
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480  
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720  
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780  
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1500

aataactcaga taggtataag atttttcaca aaatccttat gtaagataca ttccattttt  
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<210> 4806  
 <211> 438  
 <212> PRT  
 <213> Homo sapiens

<400> 4806  
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 Arg Ser Asn Trp Lys Ile Gln Ser Leu Lys Asp Glu Ile Thr Ser Glu  
 35 40 45  
 Lys Leu Asn Gly Val Lys Leu Trp Ile Thr Ala Gly Pro Arg Glu Lys  
 50 55 60  
 Phe Thr Ala Ala Glu Phe Glu Ile Leu Lys Lys Tyr Leu Asp Thr Gly  
 65 70 75 80  
 Gly Asp Val Leu Val Met Leu Gly Glu Gly Gly Glu Ser Arg Phe Asp  
 85 90 95  
 Thr Asn Ile Asn Phe Leu Leu Glu Glu Tyr Gly Ile Met Val Asn Asn  
 100 105 110  
 Asp Ala Val Val Arg Asn Val Tyr His Lys Tyr Phe His Pro Lys Glu  
 115 120 125  
 Ala Leu Val Ser Ser Gly Val Leu Asn Arg Glu Ile Ser Arg Ala Ala  
 130 135 140  
 Gly Lys Ala Val Leu Ala Ile Ile Asp Glu Glu Ser Ser Gly Asn Asn  
 145 150 155 160  
 Ala Gln Ala Leu Thr Phe Val Tyr Pro Phe Gly Ala Thr Leu Ser Val  
 165 170 175  
 Met Lys Pro Ala Val Ala Val Leu Ser Thr Gly Ser Val Cys Phe Pro  
 180 185 190  
 Leu Asn Arg Pro Ile Leu Ala Phe Tyr His Ser Lys Asn Gln Gly Gly  
 195 200 205  
 Lys Leu Ala Val Leu Gly Ser Cys His Met Phe Ser Asp Gln Tyr Leu  
 210 215 220  
 Asp Lys Glu Glu Asn Ser Lys Ile Met Asp Val Val Val Phe Gln Trp  
 225 230 235 240  
 Leu Thr Thr Gly Asp Ile His Leu Asn Gln Ile Asp Ala Glu Asp Pro  
 245 250 255  
 Glu Ile Ser Asp Tyr Met Met Leu Pro Tyr Thr Ala Thr Leu Ser Lys  
 260 265 270  
 Arg Asn Arg Glu Cys Leu Gln Glu Ser Asp Glu Ile Pro Arg Asp Phe  
 275 280 285  
 Thr Thr Leu Phe Asp Leu Ser Ile Phe Gln Leu Asp Thr Thr Ser Phe  
 290 295 300  
 His Ser Val Ile Glu Ala His Glu Gln Leu Asn Val Lys His Glu Pro  
 305 310 315 320  
 Leu Gln Leu Ile Gln Pro Gln Phe Glu Thr Pro Leu Pro Thr Leu Gln  
 325 330 335  
 Pro Ala Val Phe Pro Pro Ser Phe Arg Glu Leu Pro Pro Pro Pro Leu

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Glu	Leu	Phe	Asp	Leu	Asp	Glu	Thr	Phe	Ser	Ser	Glu	Lys	Ala	Arg	Leu
	355						360					365			
Ala	Gln	Ile	Thr	Asn	Lys	Cys	Thr	Glu	Glu	Asp	Leu	Glu	Phe	Tyr	Val
	370					375						380			
Arg	Lys	Cys	Gly	Asp	Ile	Leu	Gly	Val	Thr	Ser	Lys	Leu	Pro	Lys	Asp
385					390					395					400
Gln	Gln	Asp	Ala	Lys	His	Ile	Leu	Glu	His	Val	Phe	Phe	Gln	Val	Val
			405						410				415		
Glu	Phe	Lys	Lys	Leu	Asn	Gln	Glu	His	Asp	Ile	Asp	Thr	Ser	Glu	Thr
			420					425					430		
Ala	Phe	Gln	Asn	Asn	Phe										
			435												

&lt;210&gt; 4807

&lt;211&gt; 1177

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4807

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1020

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 1177

<210> 4808

<211> 313

<212> PRT

<213> Homo sapiens

<400> 4808

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Arg	Gly	Ile	Gly	Arg	Gly	Ile	Ala	Leu	Gln	Leu	Cys	Lys	Ala	Gly	Ala	20	25	30	
Thr	Val	Tyr	Ile	Thr	Gly	Arg	His	Leu	Asp	Thr	Leu	Arg	Val	Val	Ala	35	40	45	
Gln	Glu	Ala	Gln	Ser	Leu	Gly	Gly	Gln	Cys	Val	Pro	Val	Val	Cys	Asp	50	55	60	
Ser	Ser	Gln	Glu	Ser	Glu	Val	Arg	Ser	Leu	Phe	Glu	Gln	Val	Asp	Arg	65	70	75	80
Glu	Gln	Gln	Gly	Arg	Leu	Asp	Val	Leu	Val	Asn	Asn	Ala	Tyr	Ala	Gly	85	90	95	
Val	Gln	Thr	Ile	Leu	Asn	Thr	Arg	Asn	Lys	Ala	Phe	Trp	Glu	Thr	Pro	100	105	110	
Ala	Ser	Met	Trp	Asp	Asp	Ile	Asn	Asn	Val	Gly	Leu	Arg	Gly	His	Tyr	115	120	125	
Phe	Cys	Ser	Val	Tyr	Gly	Ala	Arg	Leu	Met	Val	Pro	Ala	Gly	Gln	Gly	130	135	140	
Leu	Ile	Val	Val	Ile	Ser	Ser	Pro	Gly	Ser	Leu	Gln	Tyr	Met	Phe	Asn	145	150	155	160
Val	Pro	Tyr	Gly	Val	Gly	Lys	Ala	Ala	Cys	Asp	Lys	Leu	Ala	Ala	Asp	165	170	175	
Cys	Ala	His	Glu	Leu	Arg	Arg	His	Gly	Val	Ser	Cys	Val	Ser	Leu	Trp	180	185	190	
Pro	Gly	Ile	Val	Gln	Thr	Glu	Leu	Leu	Lys	Glu	His	Met	Ala	Lys	Glu	195	200	205	
Glu	Val	Leu	Gln	Asp	Pro	Val	Leu	Lys	Gln	Phe	Lys	Ser	Ala	Phe	Ser	210	215	220	
Ser	Ala	Glu	Thr	Thr	Glu	Leu	Ser	Gly	Lys	Cys	Val	Val	Ala	Leu	Ala	225	230	235	240
Thr	Asp	Pro	Asn	Ile	Leu	Ser	Leu	Ser	Gly	Lys	Val	Leu	Pro	Ser	Cys	245	250	255	
Asp	Leu	Ala	Arg	Arg	Tyr	Gly	Leu	Arg	Asp	Val	Asp	Gly	Arg	Pro	Val	260	265	270	
Gln	Asp	Tyr	Leu	Ser	Ser	Ser	Val	Leu	Ser	His	Val	Ser	Gly	Leu		275	280	285	
Gly	Trp	Leu	Ala	Ser	Tyr	Leu	Pro	Ser	Phe	Leu	Arg	Val	Pro	Lys	Trp	290	295	300	
Ile	Ile	Ala	Leu	Tyr	Thr	Ser	Lys	Phe								305	310		



<210> 4809  
 <211> 999  
 <212> DNA  
 <213> Homo sapiens

<400> 4809  
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 120  
 tcctgtaaga gactgttccc tcctcccaca cttccttgag aagcacttgc ccctccagga  
 180  
 taacagcatc actgagcctg gggaacagac agtccctagt ccaagccctg gaggtaagaa  
 240  
 aggagggggc ggccaggatg ctcatgtgtg tcagcatagg ccaggccctt gctaccttga  
 300  
 ccctgagggc cagagcacag gcggaactcg gacatagggc cacaggtgac tgcttaatga  
 360  
 caaccatgct agtcctggc aatgaggggt caggagcgtg tgtgaataat ggggcacctg  
 420  
 acccagggct ggggtacaga ggggtgggggt taaaaatggg tcatctgtcg caggacacct  
 480  
 ggaggatgag gaaagagccc ccaggcaaac ccattctgtg agcaattccc atctgctgtc  
 540  
 tccaaatcct gtctagactc tgaccctgct ggccccctcc agggctccca gcctggttgc  
 600  
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 660  
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 720  
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 780  
 cttcagctcc tgggggcttt gcacggctgc tcctttcttc cccctctgcc ctcaggccag  
 840  
 ccttgctcct gatcactacc ttcttcattt ctgtacctgg ctgacatctg tccttccccg  
 900  
 ccaactacaa ggtagacccc gggagggcag ggatggtgca ctgtgttcag ggtgcatttg  
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 ccgccagtgg agggaggcac ccaggccact cccgccggc  
 999

<210> 4810  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 4810  
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 Val Ser Lys Ser Cys Leu Asp Ser Asp Pro Ala Gly Pro Phe Gln Gly  
 20 25 30  
 Ser Gln Pro Gly Cys His Ser Gly Leu Leu Thr Asn Thr Pro Ala Ala  
 35 40 45  
 Leu Val Pro Ala His Ala Arg Gln Arg Ser Gln Pro Ser Leu Leu Leu

50	55	60
Ser Ser Ser Pro Arg Lys Ser Arg Ser Trp Gln Gly Ser Gly Pro Met		
65	70	75
Trp Pro Gly Pro Gly Tyr Phe Pro Asp Leu Thr Ser Pro Thr Ala Gln		80
	85	90
Pro Leu Gln Leu Leu Gly Ala Leu His Gly Cys Ser Phe Pro Pro Pro		95
	100	105
Leu Pro Ser Gly Gln Pro Cys Pro		110
	115	120

&lt;210&gt; 4811

&lt;211&gt; 3207

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4811

```

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120
atgaaccctg cccagaagcc ccagccccc cccaggagcg ccggcagaag cctgttgtgc
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600
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720
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780
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1140

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1380  
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2100  
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 3060  
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 3180  
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 3207

&lt;210&gt; 4812

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4812

Met	Asp	Met	Ser	Leu	Asp	Lys	Ala	Glu	Ala	Ala	Leu	Val	Ala	Lys	Glu
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Leu	Arg	Thr	Leu	Leu	Glu	Glu	Ala	Val	Pro	Leu	Ser	Cys	Ala	Leu	Pro
			20					25					30		
Lys	Val	Thr	Leu	Pro	Asn	Tyr	Asp	Asn	Val	Pro	Gly	Asn	Leu	Met	Leu
	35						40					45			
Ser	Ala	Leu	Gly	Leu	Arg	Leu	Gly	Asp	Arg	Val	Leu	Leu	Asp	Gly	Gln
	50					55					60				
Lys	Thr	Gly	Thr	Leu	Arg	Phe	Cys	Gly	Thr	Thr	Glu	Phe	Ala	Ser	Gly
65					70					75				80	
Ser	Trp	Val	Gly	Val	Glu	Leu	Asp	Glu	Pro	Glu	Gly	Lys	Asn	Asp	Gly
			85					90					95		
Ser	Val	Gly	Gly	Val	Arg	Tyr	Phe	Ile	Cys	Pro	Pro	Lys	Gln	Gly	Leu
	100							105					110		
Phe	Ala	Ser	Val	Ser	Lys	Ile	Ser	Lys	Ala	Val	Asp	Ala	Pro	Pro	Ser
	115					120						125			
Ser	Val	Thr	Ser	Thr	Pro	Gly	Pro	Pro	Arg	Met	Asp	Phe	Ser	Arg	Val
	130					135					140				
Thr	Gly	Lys	Gly	Arg	Arg	Glu	His	Lys	Gly	Lys	Lys	Lys	Thr	Pro	Ser
145					150					155				160	
Ser	Pro	Ser	Leu	Gly	Ser	Leu	Gln	Gln	Arg	Asp	Gly	Ala	Lys	Ala	Glu
			165						170					175	
Val	Gly	Asp	Gln	Val	Leu	Val	Ala	Gly	Gln	Lys	Gln	Gly	Ile	Val	Arg
	180							185					190		
Phe	Tyr	Gly	Lys	Thr	Asp	Phe	Ala	Pro	Gly	Tyr	Trp	Tyr	Gly	Ile	Glu
	195						200					205			
Leu	Asp	Gln	Pro	Thr	Gly	Lys	His	Asp	Gly	Ser	Val	Phe	Gly	Val	Arg
	210					215					220				
Tyr	Phe	Thr	Cys	Pro	Pro	Arg	His	Gly	Val	Phe	Ala	Pro	Ala	Ser	Arg
225					230					235				240	
Ile	Gln	Arg	Ile	Gly	Gly	Ser	Thr	Asp	Ser	Pro	Gly	Asp	Ser	Val	Gly

```

                245                250                255
Ala Lys Lys Val His Gln Val Thr Met Thr Gln Pro Lys Arg Thr Phe
                260                265                270
Thr Thr Val Arg Thr Pro Lys Asp Ile Ala Ser Glu Asn Ser Ile Ser
                275                280                285
Arg Leu Leu Phe Cys Cys Trp Phe Pro Trp Met Leu Arg Ala Glu Met
                290                295                300
Gln Ser
305

```

<210> 4813  
 <211> 400  
 <212> DNA  
 <213> Homo sapiens

```

<400> 4813
tggccacact tacccaacag gtaggaggtta cagggaggat taaactgaac gcggttcctg
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gtgggtgtcc tgcacatgct gctgtctcct tggggctctg cacctgcct cctgtctgcc
120
agtgactgtg ggtgggaaag gaggcctggtg tggtgcagc tttcctctgc aaacctccac
180
ctcgcccaca gggcttggtt tttcctccag ctgtccagga aaccaccatc atgattgtta
240
aacacagatt tgaacattca cgaagaaact tccagggtga gccaaaccct cttcctcccc
300
actgcacctc caagcagcct tcctgaaagg gaaaagagta cagacctgcc ctctggggac
360
ccctgtgccc tgccatgacc agcctttccc cttcacgcgt
400

```

<210> 4814  
 <211> 125  
 <212> PRT  
 <213> Homo sapiens

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<400> 4814
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1          5          10          15
Phe Gln Glu Gly Cys Leu Glu Val Gln Trp Gly Gly Arg Gly Phe Gly
20        25        30
Ser Pro Trp Lys Phe Leu Arg Glu Cys Ser Asn Leu Cys Leu Thr Ile
35        40        45
Met Met Val Val Ser Trp Thr Ala Gly Gly Lys Ala Lys Pro Cys Gly
50        55        60
Arg Gly Gly Gly Leu Gln Arg Lys Ala Ala Ala Thr Thr Ala Ser Phe
65        70        75        80
Pro Thr His Ser His Trp Gln Thr Gly Gly Gln Val Gln Ser Pro Lys
85        90        95
Glu Thr Ala Ala Cys Ala Gly His Pro Pro Gly Thr Ala Phe Ser Leu
100       105       110
Ile Leu Pro Val Pro Pro Thr Cys Trp Val Ser Val Ala
115       120       125

```

<210> 4815  
 <211> 528  
 <212> DNA  
 <213> Homo sapiens

<400> 4815  
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 120  
 agcatgtcta caagctctgt acgcaaacga tctgaagggtg aagagaagac attaacaggg  
 180  
 gacgtgaaaa ccagtcctcc acgaactgca ccaaagaaac agctaccttc tattcccaaa  
 240  
 aatgctttgc ccataactaa gcctacatca cctgccccag cagcacagtc aacaaatggc  
 300  
 acccatgcct cttacggacc cttctacctg gaatattcac tccttgcaga atttaccttg  
 360  
 gttgtgaagc agaagctacc aggcgtctat gtgcagccat cttatcgctc tgcattaatg  
 420  
 tagtttggag taatattcat acggcatgga ctttaccaag atggcgtatt taagtttaca  
 480  
 gtttacatcc ctgataacta tccagatggt gactgtccac gcttggtg  
 528

<210> 4816  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 4816  
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 1 5 10 15  
 Glu Gly Glu Glu Lys Thr Leu Thr Gly Asp Val Lys Thr Ser Pro Pro  
 20 25 30  
 Arg Thr Ala Pro Lys Lys Gln Leu Pro Ser Ile Pro Lys Asn Ala Leu  
 35 40 45  
 Pro Ile Thr Lys Pro Thr Ser Pro Ala Pro Ala Ala Gln Ser Thr Asn  
 50 55 60  
 Gly Thr His Ala Ser Tyr Gly Pro Phe Tyr Leu Glu Tyr Ser Leu Leu  
 65 70 75 80  
 Ala Glu Phe Thr Leu Val Val Lys Gln Lys Leu Pro Gly Val Tyr Val  
 85 90 95  
 Gln Pro Ser Tyr Arg Ser Ala Leu Met  
 100 105

<210> 4817  
 <211> 1106  
 <212> DNA  
 <213> Homo sapiens

<400> 4817  
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 60

ggtgggggac gggccgaggc gatggcggag aagtttgacc acctagagga gcacctggag  
 120  
 aagttcgtgg agaacattcg gcagctcggc atcatcgta gtgacttcca gcccagcagc  
 180  
 caggccgggc tcaacaaaaa gctgaatttt attgttactg gcttacagga tattgacaag  
 240  
 tgcagacagc agcttcatga tattactgta ccgtagaag tttttgaata tatagatcaa  
 300  
 ggtcgaaatc cccagctcta caccaaagag tgccctggaga gggctctagc taaaaatgag  
 360  
 caagttaaag gcaagatcga caccatgaag aaatttaaaa gcctgttgat tcaagaactt  
 420  
 tctaaagtat ttccggaaga catggctaag tatcgaagca tccgggggga ggatcacccg  
 480  
 ccttcttaac cagctcacc cccctgtgtg aagatcccc gggactgcga tgcggcgtga  
 540  
 ggctgggact gcgagtgtg acgccacctt cctgtgtagg tgggactggg ccctggacac  
 600  
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 660  
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 840  
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 960  
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 1080  
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 1106

&lt;210&gt; 4818

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4818

Met	Ala	Glu	Lys	Phe	Asp	His	Leu	Glu	Glu	His	Leu	Glu	Lys	Phe	Val
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Glu	Asn	Ile	Arg	Gln	Leu	Gly	Ile	Ile	Val	Ser	Asp	Phe	Gln	Pro	Ser
			20				25						30		
Ser	Gln	Ala	Gly	Leu	Asn	Gln	Lys	Leu	Asn	Phe	Ile	Val	Thr	Gly	Leu
		35				40					45				
Gln	Asp	Ile	Asp	Lys	Cys	Arg	Gln	Gln	Leu	His	Asp	Ile	Thr	Val	Pro
	50				55					60					
Leu	Glu	Val	Phe	Glu	Tyr	Ile	Asp	Gln	Gly	Arg	Asn	Pro	Gln	Leu	Tyr
65				70				75					80		
Thr	Lys	Glu	Cys	Leu	Glu	Arg	Ala	Leu	Ala	Lys	Asn	Glu	Gln	Val	Lys

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<400> 4819
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720
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960
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1080
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gaagatgagg accagctgat gtacagacta tcctaccaag tgcagggccc acgccctgta
1200

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 gcagtgcggt gtatacataa tagcaagatc atcatgctca ggaacgacat ttaccgtctgc  
 1500  
 cgagcgtcag gcatctttct tcgcttgag ggcggtggct tgattgccgg caacaacatt  
 1560  
 taccacaatg cagaggctgg ttagacatc cggaaaaagt ccaaccact tcagattggg  
 1620  
 aacctcgtg ccgaattctt ggcctcgagg gccaa  
 1655

&lt;210&gt; 4820

&lt;211&gt; 551

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4820

Arg	Pro	Arg	Pro	Gly	Leu	Arg	Gly	Gly	Arg	Ala	Pro	Cys	Glu	Val	Thr
1				5					10					15	
Met	Glu	Ala	Gly	Gly	Leu	Pro	Leu	Glu	Leu	Trp	Arg	Met	Ile	Leu	Ala
			20					25					30		
Tyr	Leu	His	Leu	Pro	Asp	Leu	Gly	Arg	Cys	Ser	Leu	Val	Cys	Arg	Ala
		35					40					45			
Trp	Tyr	Glu	Leu	Ile	Leu	Ser	Leu	Asp	Ser	Thr	Arg	Trp	Arg	Gln	Leu
	50					55				60					
Cys	Leu	Gly	Cys	Thr	Glu	Cys	Arg	His	Pro	Asn	Trp	Pro	Asn	Gln	Pro
65					70					75				80	
Asp	Val	Glu	Pro	Glu	Ser	Trp	Arg	Glu	Ala	Phe	Lys	Gln	His	Tyr	Leu
			85						90					95	
Ala	Ser	Lys	Thr	Trp	Thr	Lys	Asn	Ala	Leu	Asp	Leu	Glu	Ser	Ser	Ile
			100					105					110		
Cys	Phe	Ser	Leu	Phe	Arg	Arg	Arg	Arg	Glu	Arg	Arg	Thr	Leu	Ser	Val
	115						120					125			
Gly	Pro	Gly	Arg	Glu	Phe	Asp	Ser	Leu	Gly	Ser	Ala	Leu	Ala	Met	Ala
	130					135					140				
Ser	Leu	Tyr	Asp	Arg	Ile	Val	Leu	Phe	Pro	Gly	Val	Tyr	Glu	Glu	Gln
145					150					155					160
Gly	Glu	Ile	Ile	Leu	Lys	Val	Pro	Val	Glu	Ile	Val	Gly	Gln	Gly	Lys
			165						170					175	
Leu	Gly	Glu	Val	Ala	Leu	Leu	Ala	Ser	Ile	Asp	Gln	His	Cys	Ser	Thr
			180					185					190		
Thr	Arg	Leu	Cys	Asn	Leu	Val	Phe	Thr	Pro	Ala	Trp	Phe	Ser	Pro	Ile
	195						200						205		
Met	Tyr	Lys	Thr	Thr	Ser	Gly	His	Val	Gln	Phe	Asp	Asn	Cys	Asn	Phe
	210					215					220				
Glu	Asn	Gly	His	Ile	Gln	Val	His	Gly	Pro	Gly	Thr	Cys	Gln	Val	Lys
225					230					235					240
Phe	Cys	Thr	Phe	Lys	Asn	Thr	His	Ile	Phe	Leu	His	Asn	Val	Pro	Leu

245 250 255  
 Cys Val Leu Glu Asn Cys Glu Phe Val Gly Ser Glu Asn Asn Ser Val  
 260 265 270  
 Thr Val Glu Gly His Pro Ser Ala Asp Lys Asn Trp Ala Tyr Lys Tyr  
 275 280 285  
 Leu Leu Gly Leu Ile Lys Ser Ser Pro Thr Phe Leu Pro Thr Glu Asp  
 290 295 300  
 Ser Asp Phe Leu Met Ser Leu Asp Leu Glu Ser Arg Asp Gln Ala Trp  
 305 310 315 320  
 Ser Pro Lys Thr Cys Asp Ile Val Ile Glu Gly Ser Gln Ser Pro Thr  
 325 330 335  
 Ser Pro Ala Ser Ser Ser Pro Lys Pro Gly Ser Lys Ala Gly Ser Gln  
 340 345 350  
 Glu Ala Glu Val Gly Ser Asp Gly Glu Arg Val Ala Gln Thr Pro Asp  
 355 360 365  
 Ser Ser Asp Gly Gly Leu Ser Pro Ser Gly Glu Asp Glu Asp Glu Asp  
 370 375 380  
 Gln Leu Met Tyr Arg Leu Ser Tyr Gln Val Gln Gly Pro Arg Pro Val  
 385 390 395 400  
 Leu Gly Gly Ser Phe Leu Gly Pro Pro Leu Pro Gly Ala Ser Ile Gln  
 405 410 415  
 Leu Pro Ser Cys Leu Val Leu Asn Ser Leu Gln Gln Glu Leu Gln Lys  
 420 425 430  
 Asp Lys Glu Ala Met Ala Leu Ala Asn Ser Val Gln Gly Cys Leu Ile  
 435 440 445  
 Arg Lys Cys Leu Phe Arg Asp Gly Lys Gly Gly Val Phe Val Cys Ser  
 450 455 460  
 His Gly Arg Ala Lys Met Glu Gly Asn Ile Phe Arg Asn Leu Thr Tyr  
 465 470 475 480  
 Ala Val Arg Cys Ile His Asn Ser Lys Ile Ile Met Leu Arg Asn Asp  
 485 490 495  
 Ile Tyr Arg Cys Arg Ala Ser Gly Ile Phe Leu Arg Leu Glu Gly Gly  
 500 505 510  
 Gly Leu Ile Ala Gly Asn Asn Ile Tyr His Asn Ala Glu Ala Gly Val  
 515 520 525  
 Asp Ile Arg Lys Lys Ser Asn Pro Leu Gln Ile Gly Asn Pro Arg Ala  
 530 535 540  
 Glu Phe Leu Ala Ser Arg Ala  
 545 550

&lt;210&gt; 4821

&lt;211&gt; 585

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4821

ggccgcgtgg aggtgctgac cgatgccgga ggttggtgctg tgattgaccg gagcggccgt  
 60  
 cacttttgta caatcctcaa ttacctgcgg gatgggtctg tgccactgcc ggagagtacg  
 120  
 agagaactgg gggagctgct gggcgaagca cgctactacc tgggtgcaggg cctgattgag  
 180  
 gactgccagc tggcgctgca gcaaaaaagg gagacgctgt ccccgctgtg cctcatcccc  
 240

atggtgacat ctccccggga ggagcagcag ctcttgcca gcacctcaa gcccgtggtg  
 300  
 aagctcctgc acaaccgcag taacaacaag tactcctaca ccagcacttc agatgacaac  
 360  
 ctacttaaga acatcgagct gtctgacaag ctggccctgc gcttcacagg gcggctactc  
 420  
 ttctcaagg atgtcctggg ggacgagatc tgctgctggt ctttctacgg gcagggccgc  
 480  
 aaaatcgccg aggtgtgctg cacctccatt gtctatgcta cggagaagaa gcagaccaag  
 540  
 gtcagagggg ctccagagcc tatgttgggg gctgggggtg gccac  
 585

<210> 4822

<211> 195

<212> PRT

<213> Homo sapiens

<400> 4822

Gly	Arg	Val	Glu	Val	Leu	Thr	Asp	Ala	Gly	Gly	Trp	Val	Leu	Ile	Asp
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Arg	Ser	Gly	Arg	His	Phe	Gly	Thr	Ile	Leu	Asn	Tyr	Leu	Arg	Asp	Gly
			20					25					30		
Ser	Val	Pro	Leu	Pro	Glu	Ser	Thr	Arg	Glu	Leu	Gly	Glu	Leu	Leu	Gly
			35				40					45			
Glu	Ala	Arg	Tyr	Tyr	Leu	Val	Gln	Gly	Leu	Ile	Glu	Asp	Cys	Gln	Leu
	50					55					60				
Ala	Leu	Gln	Gln	Lys	Arg	Glu	Thr	Leu	Ser	Pro	Pro	Leu	Cys	Leu	Ile
65					70					75					80
Met	Val	Thr	Ser	Pro	Arg	Glu	Glu	Gln	Gln	Leu	Leu	Ala	Ser	Thr	Ser
				85					90					95	
Lys	Pro	Val	Val	Lys	Leu	Leu	His	Asn	Arg	Ser	Asn	Asn	Lys	Tyr	Ser
			100					105					110		
Tyr	Thr	Ser	Thr	Ser	Asp	Asp	Asn	Leu	Leu	Lys	Asn	Ile	Glu	Leu	Phe
		115					120					125			
Asp	Lys	Leu	Ala	Leu	Arg	Phe	His	Gly	Arg	Leu	Leu	Phe	Leu	Lys	Asp
		130				135					140				
Val	Leu	Gly	Asp	Glu	Ile	Cys	Cys	Trp	Ser	Phe	Tyr	Gly	Gln	Gly	Arg
145					150					155					160
Lys	Ile	Ala	Glu	Val	Cys	Cys	Thr	Ser	Ile	Val	Tyr	Ala	Thr	Glu	Lys
				165					170					175	
Lys	Gln	Thr	Lys	Val	Arg	Gly	Ala	Pro	Glu	Pro	Met	Leu	Gly	Ala	Gly
			180					185					190		
Gly	Gly	His													
		195													

<210> 4823

<211> 1984

<212> DNA

<213> Homo sapiens

<400> 4823

nggtttttgt tttttgagcc gcaccccgcg gaggcgagga agcagcagcc gcagcacagc  
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agcagctcca atggcgtaa aatggagaat gatgaatcag caaaagaaga gaaatctgac  
120  
ttaaaggaaa aatctacagg aagtaagaag gccaatagat ttcaccta ttcaaaagac  
180  
aagaattcgg gactggaga aaagaagggt ccaaatacgta acagagtttt cattagcaac  
240  
atcccatatg acatgaaatg gcaagctatt aaagatctaa tgagagagaa agttggtgag  
300  
gttacatacg tggagctctt taaggatgag gaaggaaaat caaggggttg tgggtggtt  
360  
gaattcaaag atgaagaatt tgtaaagaaa gccctagaaa ctatgaacaa atatgatctt  
420  
agtggagac cccttaatat taaagaggat cctgatggag aaaatgctcg tagggcattg  
480  
cagcgaacag gaggatcatt tccaggagga cacgtccctg atatgggac agggttgatg  
540  
aatttaccac cttccatact caataatcca aacattcctc ctgaagtcat cagtaatttg  
600  
caggccggta gacttggttc cacaattttt gttgccaatc ttgacttcaa agttggttgg  
660  
aagaagctaa aggaagtgtt cagcatagct ggaactgtga agcgggcaga tattaagaa  
720  
gacaaagatg gcaagagcag aggaatgggc actgtcactt ttgagcaagc aattgaagca  
780  
gttcaagcaa tttctatgtt caatgggcag tttttatttg atagacctat gcatgtgaaa  
840  
atggatgaca agtctgttcc tcatgaagag taccgttcac ctgatggtta aacaccaca  
900  
ttaccacgtg gtcttgagg cattgggatg ggacttggtc cgggtggaca gcctattagt  
960  
gccagccagt tgaacatagg tggagtaatg ggaaatttag gtccagggtg tatgggaatg  
1020  
gatggtccag gttttggagg aatgaataga attggaggag gaataggggt tgggtggtctg  
1080  
gaagcaatga atagcatggg aggatattgga ggagttggcc gaatgggaga gctgtaccgt  
1140  
ggtgcgatga ctagtagcat ggagcgagat ttcggacgtg gtgatattgg aataaatcga  
1200  
gcctttggcg attccttttg tagacttggc agtgcaatga ttggagggat tacaggaaga  
1260  
ataggatctt ctaacatggg tccagtagga tctggaataa gtggtggaat gggtagcatg  
1320  
aacagtgtga ctggaggaat ggggatggga ctggaccgga tgagttccag ctttgataga  
1380  
atgggaccag gtataggagc tatactggaa aggagcatcg atatggatcg aggattttta  
1440  
tcgggtccaa tgggaagcgg aatgagagag agaataaggct ccaaaggcaa ccagatattt  
1500  
gtcagaaatc taccttttga cttgacttgg cagaaactaa aagagaaatt cagtcagtgt  
1560  
ggtcatgtaa tgtttgcaga aataaaaatg gagaatggaa agtcaaaagg ctgtggaaca  
1620  
gtcagatttg actccccaga atcagctgaa aaagcctgca gaataatgaa tggcataaaa  
1680

atcagtggca gagaaattga tgttcgcttg gatcgtaatg cataatttca agccatgggt  
 1740  
 ggaacattcc tacatctgtt ttgctgaatc tcctagtaaa agtcattttt ttaaagtaat  
 1800  
 attgtatgct tacaaaagct gtaaaaatga acttttaaaa ctcccaccag cttttaacag  
 1860  
 gtataatggg aaaaatatac tgtaaatttt tggtaatctc aagtttgggt ttttaaagac  
 1920  
 agcaagtctg gtcattcagt ttaaatgaat gggataactg gtttttaatg aaataagcca  
 1980  
 tttt  
 1984

<210> 4824

<211> 547

<212> PRT

<213> Homo sapiens

<400> 4824

Met	Glu	Asn	Asp	Glu	Ser	Ala	Lys	Glu	Glu	Lys	Ser	Asp	Leu	Lys	Glu
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Lys	Ser	Thr	Gly	Ser	Lys	Lys	Ala	Asn	Arg	Phe	His	Pro	Tyr	Ser	Lys
		20						25				30			
Asp	Lys	Asn	Ser	Gly	Thr	Gly	Glu	Lys	Lys	Gly	Pro	Asn	Arg	Asn	Arg
		35				40					45				
Val	Phe	Ile	Ser	Asn	Ile	Pro	Tyr	Asp	Met	Lys	Trp	Gln	Ala	Ile	Lys
	50				55					60					
Asp	Leu	Met	Arg	Glu	Lys	Val	Gly	Glu	Val	Thr	Tyr	Val	Glu	Leu	Phe
65				70				75					80		
Lys	Asp	Ala	Glu	Gly	Lys	Ser	Arg	Gly	Cys	Gly	Val	Val	Glu	Phe	Lys
			85					90					95		
Asp	Glu	Glu	Phe	Val	Lys	Lys	Ala	Leu	Glu	Thr	Met	Asn	Lys	Tyr	Asp
		100						105					110		
Leu	Ser	Gly	Arg	Pro	Leu	Asn	Ile	Lys	Glu	Asp	Pro	Asp	Gly	Glu	Asn
		115				120						125			
Ala	Arg	Arg	Ala	Leu	Gln	Arg	Thr	Gly	Gly	Ser	Phe	Pro	Gly	Gly	His
	130				135						140				
Val	Pro	Asp	Met	Gly	Ser	Gly	Leu	Met	Asn	Leu	Pro	Pro	Ser	Ile	Leu
145				150				155					160		
Asn	Asn	Pro	Asn	Ile	Pro	Pro	Glu	Val	Ile	Ser	Asn	Leu	Gln	Ala	Gly
			165					170					175		
Arg	Leu	Gly	Ser	Thr	Ile	Phe	Val	Ala	Asn	Leu	Asp	Phe	Lys	Val	Gly
		180					185					190			
Trp	Lys	Lys	Leu	Lys	Glu	Val	Phe	Ser	Ile	Ala	Gly	Thr	Val	Lys	Arg
	195					200					205				
Ala	Asp	Ile	Lys	Glu	Asp	Lys	Asp	Gly	Lys	Ser	Arg	Gly	Met	Gly	Thr
	210				215					220					
Val	Thr	Phe	Glu	Gln	Ala	Ile	Glu	Ala	Val	Gln	Ala	Ile	Ser	Met	Phe
225				230				235					240		
Asn	Gly	Gln	Phe	Leu	Phe	Asp	Arg	Pro	Met	His	Val	Lys	Met	Asp	Asp
			245					250					255		
Lys	Ser	Val	Pro	His	Glu	Glu	Tyr	Arg	Ser	Pro	Asp	Gly	Lys	Thr	Pro
		260					265					270			
Gln	Leu	Pro	Arg	Gly	Leu	Gly	Gly	Ile	Gly	Met	Gly	Leu	Gly	Pro	Gly

275 280 285  
 Gly Gln Pro Ile Ser Ala Ser Gln Leu Asn Ile Gly Gly Val Met Gly  
 290 295 300  
 Asn Leu Gly Pro Gly Gly Met Gly Met Asp Gly Pro Gly Phe Gly Gly  
 305 310 315 320  
 Met Asn Arg Ile Gly Gly Gly Ile Gly Phe Gly Gly Leu Glu Ala Met  
 325 330 335  
 Asn Ser Met Gly Gly Phe Gly Gly Val Gly Arg Met Gly Glu Leu Tyr  
 340 345 350  
 Arg Gly Ala Met Thr Ser Ser Met Glu Arg Asp Phe Gly Arg Gly Asp  
 355 360 365  
 Ile Gly Ile Asn Arg Ala Phe Gly Asp Ser Phe Gly Arg Leu Gly Ser  
 370 375 380  
 Ala Met Ile Gly Gly Ile Thr Gly Arg Ile Gly Ser Ser Asn Met Gly  
 385 390 395 400  
 Pro Val Gly Ser Gly Ile Ser Gly Gly Met Gly Ser Met Asn Ser Val  
 405 410 415  
 Thr Gly Gly Met Gly Met Gly Leu Asp Arg Met Ser Ser Ser Phe Asp  
 420 425 430  
 Arg Met Gly Pro Gly Ile Gly Ala Ile Leu Glu Arg Ser Ile Asp Met  
 435 440 445  
 Asp Arg Gly Phe Leu Ser Gly Pro Met Gly Ser Gly Met Arg Glu Arg  
 450 455 460  
 Ile Gly Ser Lys Gly Asn Gln Ile Phe Val Arg Asn Leu Pro Phe Asp  
 465 470 475 480  
 Leu Thr Trp Gln Lys Leu Lys Glu Lys Phe Ser Gln Cys Gly His Val  
 485 490 495  
 Met Phe Ala Glu Ile Lys Met Glu Asn Gly Lys Ser Lys Gly Cys Gly  
 500 505 510  
 Thr Val Arg Phe Asp Ser Pro Glu Ser Ala Glu Lys Ala Cys Arg Ile  
 515 520 525  
 Met Asn Gly Ile Lys Ile Ser Gly Arg Glu Ile Asp Val Arg Leu Asp  
 530 535 540  
 Arg Asn Ala  
 545

&lt;210&gt; 4825

&lt;211&gt; 2380

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4825

nnagagaatt cggcacgggt ggagaagcaa ctgcagcaag ctctggagga gggtaagcag  
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 ggccggcggt gcctgggggtc gtcgcgacca ggcagtgcag accggcttcg tcagcyccat  
 120  
 ccggccccctg gggcbkcagc tgggcgcccc gccggccgct gtctgcagcc ctttggagcg  
 180  
 cgtkctgggc tcgcccgcgc gctccccggc cgccccctc gcgccctccg cggccagcct  
 240  
 ctcgtcgtcc tccacctcca cctccaccac ctattctctg tcggcccgct tcatgcccgg  
 300  
 caccatctgg tcgttctcgc acgnccgcgc gctcggggcg ggactggagc ccactctggg  
 360